RECORDS MANAGEMENT HANDBOOK

Managing Forms

FORMS DESIGN

SEPTEMBER 1960

GENERAL SERVICES ADMINISTRATION
NATIONAL ARCHIVES AND RECORDS SERVICE
OFFICE OF RECORDS MANAGEMENT

Federal Stock Number
7610-753-4771

RECORDS MANAGEMENT HANDBOOKS are developed by the National Archives and Records Service as technical guides to reducing and simplifying paperwork.

RECORDS MANAGEMENT HANDBOOKS:

Managing correspondence: *Plain Letters*	1955	47 p.
Managing correspondence: *Form Letters*	1954	33 p.
Managing correspondence: *Guide Letters*	1955	23 p.
Managing forms: *Forms Analysis*	1959	62 p.
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For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. - Price 45 cents

CONTENTS

I. INTRODUCTION TO FORMS DESIGN

Forms design is that phase of agency management which provides the technical skill, the special resources and services, necessary to provide the agency with its printed forms and give the assurance that they meet standards.

Forms design is the outgrowth of forms analysis. It is only after the need for the form has been established and the effect of the methods and procedures controlling its use have been ascertained that the design of a form is begun. The design of a form evolves as one integrates, artfully, the needs of the persons filling it in, the processors of the information it contains, the printer who manufactures it, and personnel manning the mailing and filing stations.

Stated another way, forms analysis resolves WHAT goes on the form while forms design continues the analysis until it resolves HOW to best arrange and present the information. In resolving the HOW, the designer must weigh the often conflicting needs of the persons mentioned above. This HOW is important, because the design of a form is one reflection of the degree of efficiency with which a system functions. Design, for example, helps to determine whether it will take 30 minutes to fill in a form, or whether it can be done in 12 minutes, with all that this means in manpower requirements to an agency.

The design of a form is dependent upon a set of principles and a group of standards.

PRINCIPLES

The principles involved are developed in the subsequent chapters at the point where they have the greatest pertinence. In this introduction, however, it can be pointed out that simplicity is the fundamental principle of forms design. The simpler the design of the form, the greater the ease in filling it in. In the interest of simplicity (to list only a few principles):

- The sequence of items should be logical
- The amount of writing should be minimal
- The characteristics of the writing machine used should be utilized to their fullest, and
- Layout should achieve good visual effect

Stated in terms like these, and like others in the checklist at the end of this handbook, principles are abstract. In the following pages it is hoped they will lose their abstractness as illustrations and examples are provided.

STANDARDS

A standard is an attempt to define the best practice. Standards are the tool whereby the various principles can be uniformly and consistently achieved.

Over the years, fortunately, a well-defined set of design standards have been developed and used by the Federal agencies to speed and make easy the reading, writing, transmitting and filing of a form. Such standards further include construction features such as paper, ink, punching, perforating, and padding which are written into specifications for procurement and reproduction of the form. This handbook will present these standards.

Because of the differences in systems and procedures, available printing facilities, and esthetic preferences among Federal officials, the standards set forth in this handbook, however, will require adjustments sometimes to fit them to specific agency needs. When deviation from standards is necessary there should be a conscious, logical justification which clearly demonstrates that more is to be gained by deviation than by compliance.

This is not to say that the efficiency of a procedure in which a form is the backbone can be guaranteed by anything so pat as a set of standards. But, since standards require careful thought and investigation, better forms are bound to result where standards are applied than where solutions are left to chance or the intuition of the worker.

BASIC TOOLS

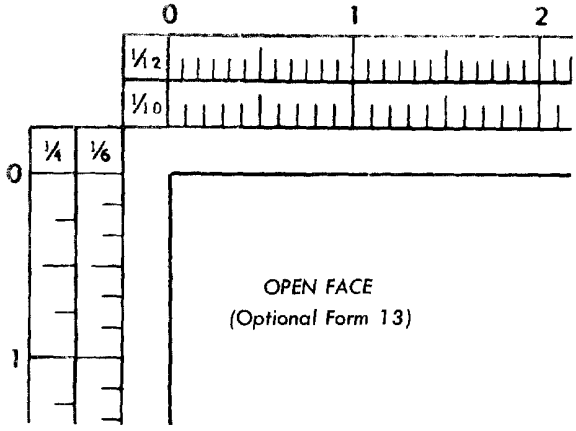
To do good work in designing forms, it is not necessary to be a skilled draftsman and the working tools needed are few and inexpensive. The basic ones needed to design forms are a design guide sheet, drawing pencil, and a triangle or ruler.

Guide Sheet

A design guide sheet aids in designing a form speedily and accurately. It provides a preprinted scale of measurement in nonreproducible blue ink which corresponds to the measurements of the writing method. The layout of the form on the guide sheet should be done in pencil so that changes can be made easily.

Federal agencies differ on the best type of guide sheet. Some use the "open face" which is blank in the design area and is scaled in tenths and twelfths horizontally and sixths and fourths vertically. This is Optional Form 13 shown in figure 1. Others prefer the "graph" or "grid" sheet which has one-inch squares divided into twelfths both horizontally and vertically. This is Optional Form 14 shown in figure 2. A few agencies are using modifications of these guide sheets. For example, one agency is using two "graph" or "grid" sheets, scaled respectively in twelfths and tenths.

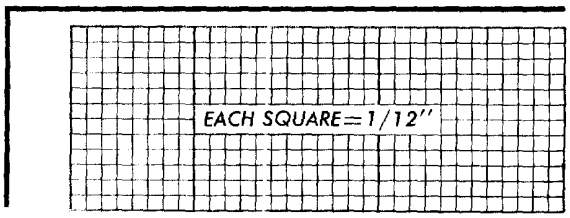
OPEN FACE GUIDE SHEET



Usually printed 8'' x 10½'' or 10½'' x 16''

Figure 1

GRAPH OR GRID GUIDE SHEET



Usually printed 8'' x 10½'' or 10½'' x 16''

Figure 2

Proportionately larger design guide sheets have been developed by some agencies for forms which are to be reduced when printed by 25 percent or 33⅓ percent.

Guide sheets for the design of forms for use on special office machines are available from the manufacturers.

Drawing Pencil

The ordinary 2H pencil (Federal Supply Stock No. 7510–189–7880) is practical for general drawing of lines and lettering.

Triangle or Ruler

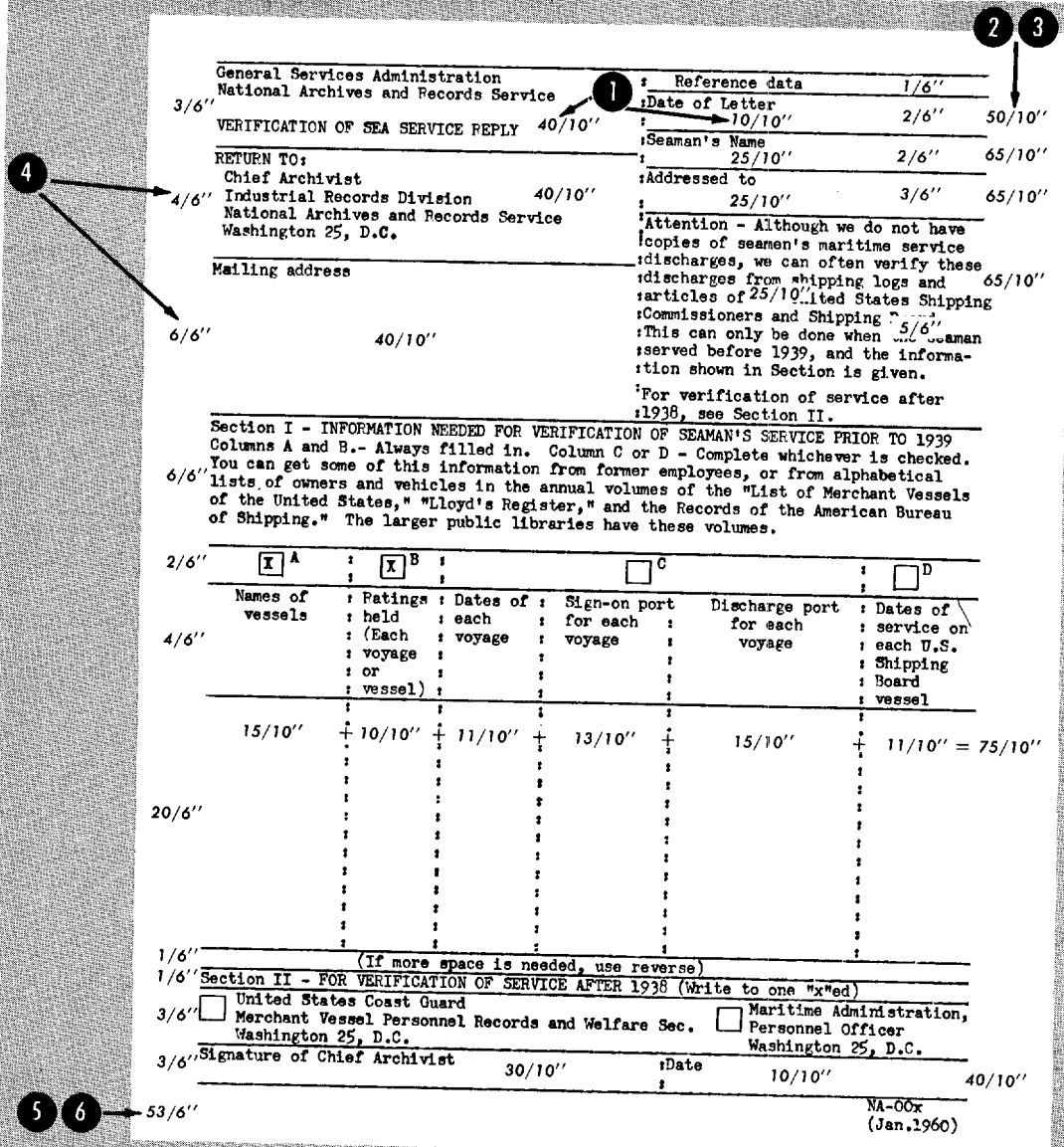
A clear plastic triangle of the 30°–60° type is best for designing forms. This triangle is available from 4 inches through 18 inches on the altitude. If desired, a regular ruler can be used instead of a triangle. A pica ruler for measuring type also should be purchased. Some prefer an engineer's scale which has six sides and is calibrated from tenths to sixtieths.

STEP-BY-STEP DESIGN

Forms design starts with a rough draft. It must change that draft to final layout. The finished design will simulate, as nearly as possible, the printed product. Approval of that design by the originator, and any others concerned, is on the basis that the printed form will look like the design. The compositor in the print shop, too, will follow the final layout exactly in preparing his copy for reproduction.

What does the forms analyst do in developing the form layout? What he has learned about the use of the form during analysis will dictate the design standards to be applied. How the final form layout evolves is shown step by step.

STEP 1—COUNT



General Services Administration
National Archives and Records Service
3/6"
VERIFICATION OF SEA SERVICE REPLY 40/10"

RETURN TO:
Chief Archivist
Industrial Records Division 40/10"
National Archives and Records Service
Washington 25, D.C.

Mailing address
6/6" 40/10"

Reference data 1/6"
Date of Letter 10/10" 2/6" 50/10"
Seaman's Name 25/10" 2/6" 65/10"
Addressed to 25/10" 3/6" 65/10"

Attention - Although we do not have copies of seamen's maritime service discharges, we can often verify these discharges from shipping logs and articles of 25/10" ited States Shipping Commissioners and Shipping 5/6" This can only be done when ... seaman served before 1939, and the information shown in Section is given. For verification of service after 1938, see Section II. 65/10"

Section I - INFORMATION NEEDED FOR VERIFICATION OF SEAMAN'S SERVICE PRIOR TO 1939
Columns A and B.- Always filled in. Column C or D - Complete whichever is checked.
6/6" You can get some of this information from former employees, or from alphabetical lists of owners and vehicles in the annual volumes of the "List of Merchant Vessels of the United States," "Lloyd's Register," and the Records of the American Bureau of Shipping." The larger public libraries have these volumes.

2/6" [X] A: Names of vessels	[X] B: Ratings held (Each voyage or vessel)	[X] B: Dates of each voyage	[ ] C: Sign-on port for each voyage	[ ] C: Discharge port for each voyage	[ ] D: Dates of service on each U.S. Shipping Board vessel
4/6" 15/10"	+ 10/10"	+ 11/10"	+ 13/10"	+ 15/10"	+ 11/10" = 75/10"
20/6"					

1/6" (If more space is needed, use reverse)
1/6" Section II - FOR VERIFICATION OF SERVICE AFTER 1938 (Write to one "x"ed)
3/6" [ ] United States Coast Guard, Merchant Vessel Personnel Records and Welfare Sec., Washington 25, D.C.
[ ] Maritime Administration, Personnel Officer, Washington 25, D.C.
3/6" Signature of Chief Archivist 30/10" Date 10/10" 40/10"

5 6 → 53/6"

NA-00x
(Jan.1960)

Figure 3

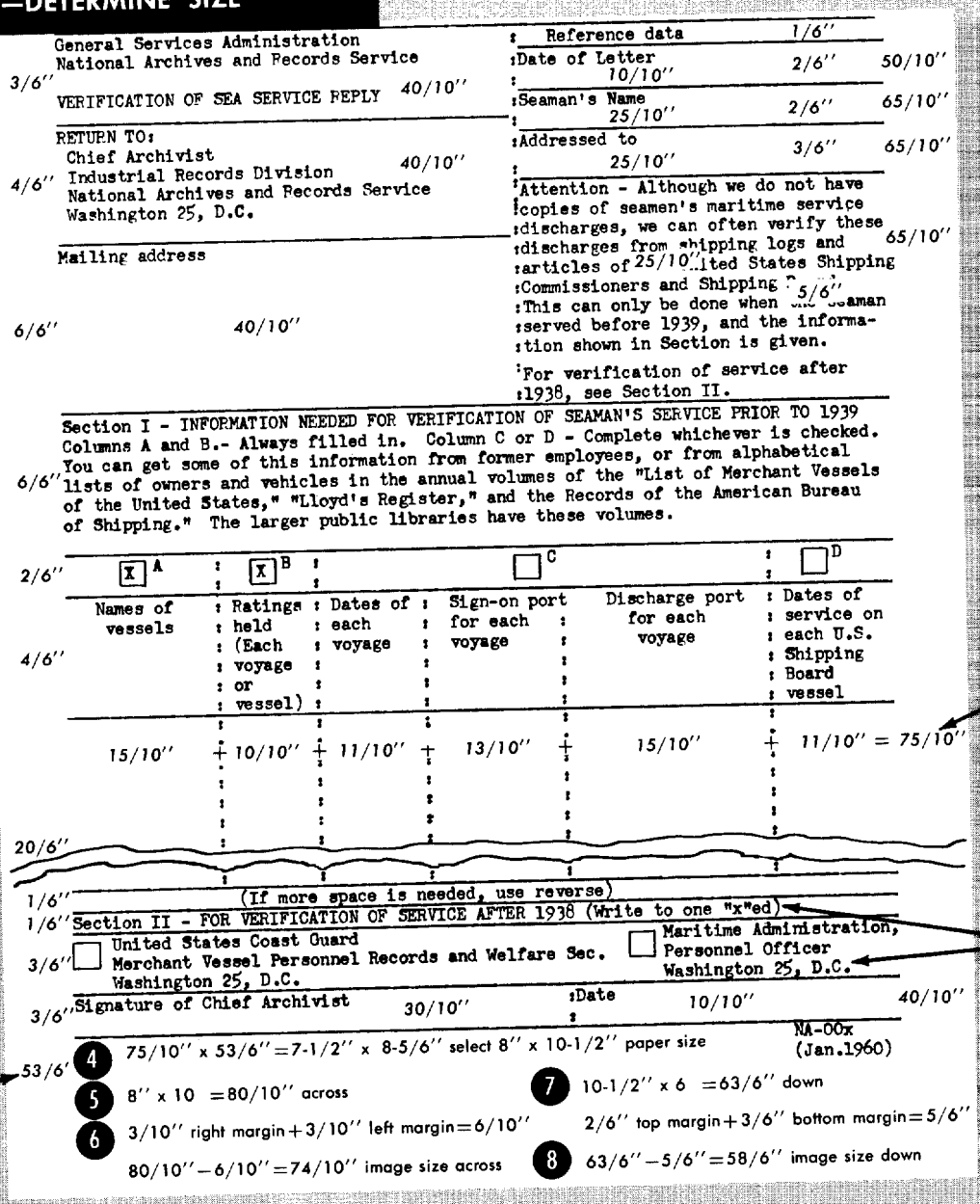
Count for space needed for written entry.

1. Note on the rough draft the number of tenths needed across in each entry space.
2. Add tenths across on each writing line.
3. Enter the total at end of writing line in right margin.
4. Note on the rough draft the number of sixths needed down for each writing line at the beginning of the writing line in the left margin.
5. Add the sixths down.
6. Enter total at bottom of column.

Count for space needed to set type.

- Consult the character count chart on page 62 for type style, type size, and number of characters per inch.
- Based on the number of characters of the type face that can be printed per inch, the space required for the printed caption is computed.
- Match space needed for type setting with space needed for writing entry to ensure space requirement will allow for either writing entry or type setting.

STEP 2—DETERMINE SIZE



Determine size from results.

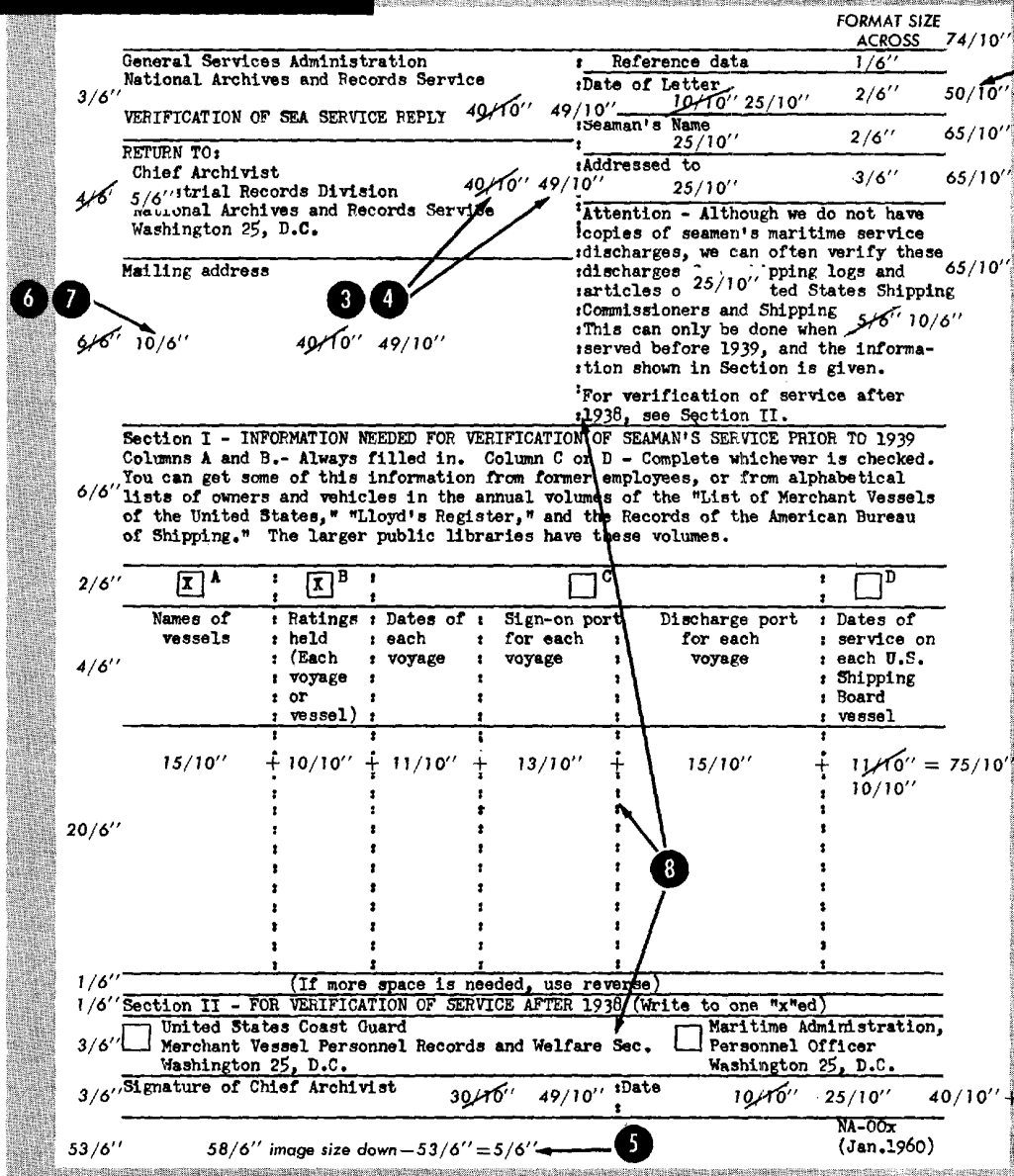
1. Longest line across the form.
2. Total number of writing lines down the form.
3. Space needed for printed captions.
4. Determines size of form.

Determine format size.

5. Multiply size of paper across by 10.
6. Subtract total 10's needed for right and left margins from total across measurement in 10's. Answer is image size across.
7. Multiply size of paper down by 6.
8. Subtract total 6's needed for top and bottom margins from total down measurement in 6's. Answer is image size down.

Figure 4

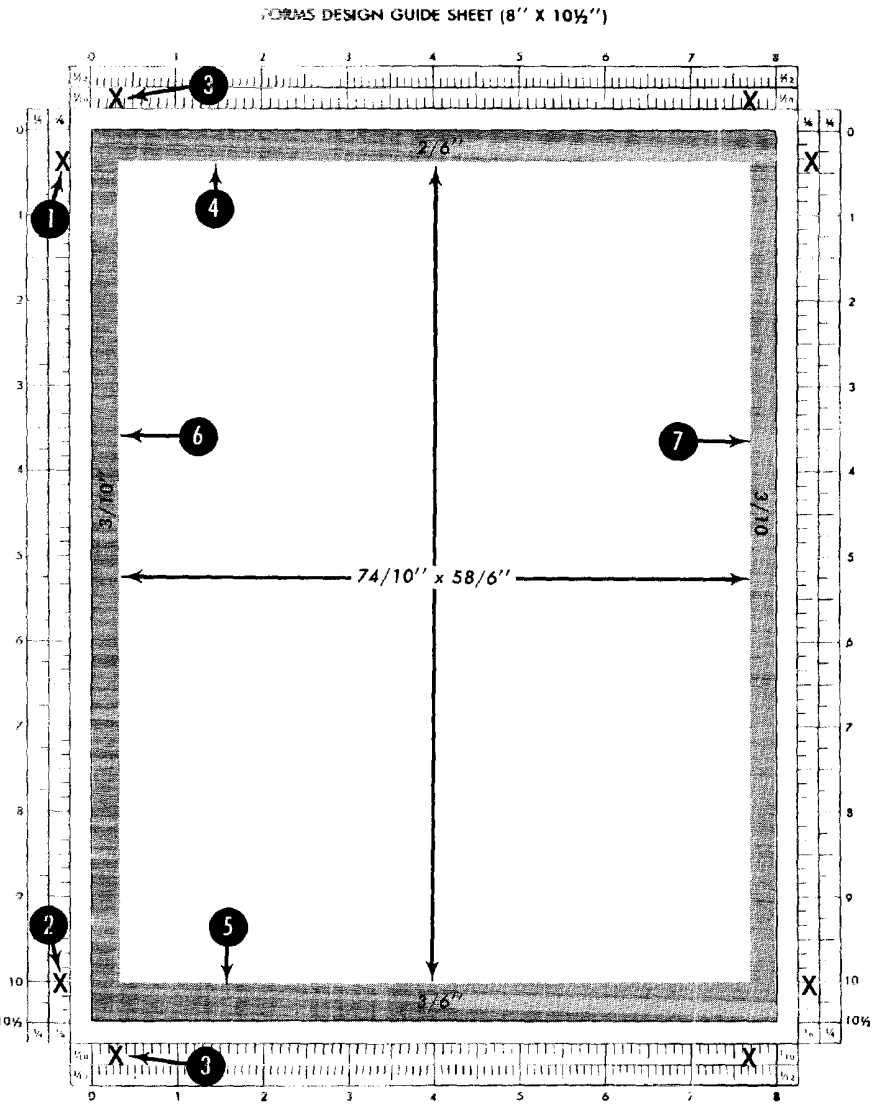
STEP 3—ADJUST



1. Subtract total of tenths across on each writing line from image size across.
2. Note number of tenths to be added or subtracted in right margin.
3. Determine where space may be added or subtracted in each entry.
4. Note where change is to be made by running a line through changed measurement and entering new measurement.
5. Subtract total of sixths down from image size down. Answer is space to be added or subtracted.
6. Determine on which writing line space may be added or subtracted.
7. Note where change is to be made by running a line through changed measurement, and entering new measurement.
8. Line up as many tabular stops as possible.

Figure 5

STEP 4—OUTLINE



On the Forms Design Guide Sheet place an "X" on the

1. 2/6" mark from the top on the side scales.
2. 3/6" mark from the bottom on the side scales.
3. 3/10" mark from each side on the top and bottom scales.

The area framed by the gray tone is the image size.

74/10" across, 58/6" down.

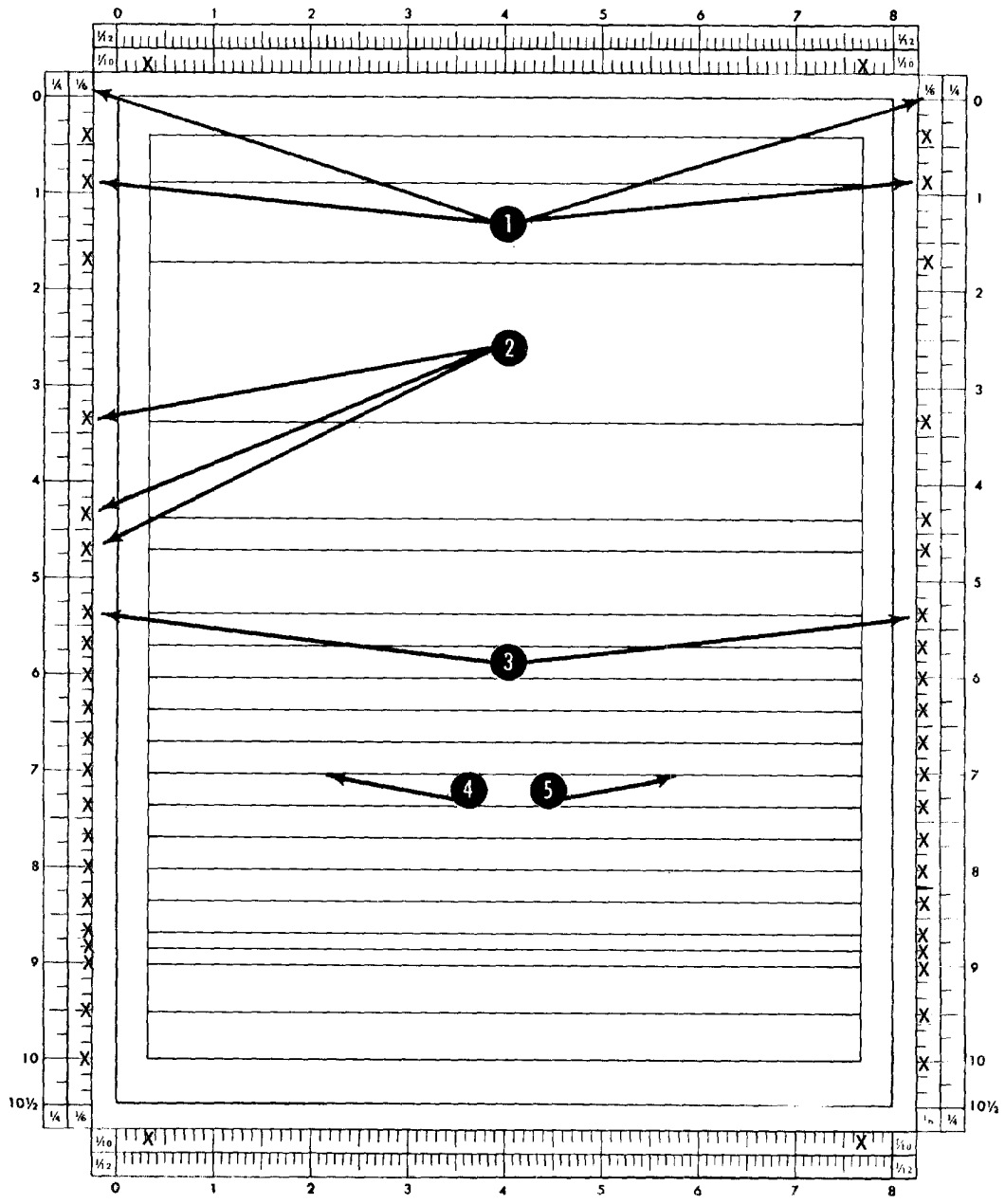
The gray tone area indicates the margins.

2/6" top, 3/6" bottom, and 3/10" on each side.

Line up triangle or ruler—	*Draw a light line from—*
4 At top with "X" mark on left scale with "X" mark on right scale.	Left to right
5 At bottom with "X" mark on left scale with "X" mark on right scale.	Left to right
6 At left with "X" mark on bottom scale with "X" mark on top scale.	Bottom to top
7 At right with "X" mark on bottom scale with "X" mark on top scale.	Bottom to top

Figure 6

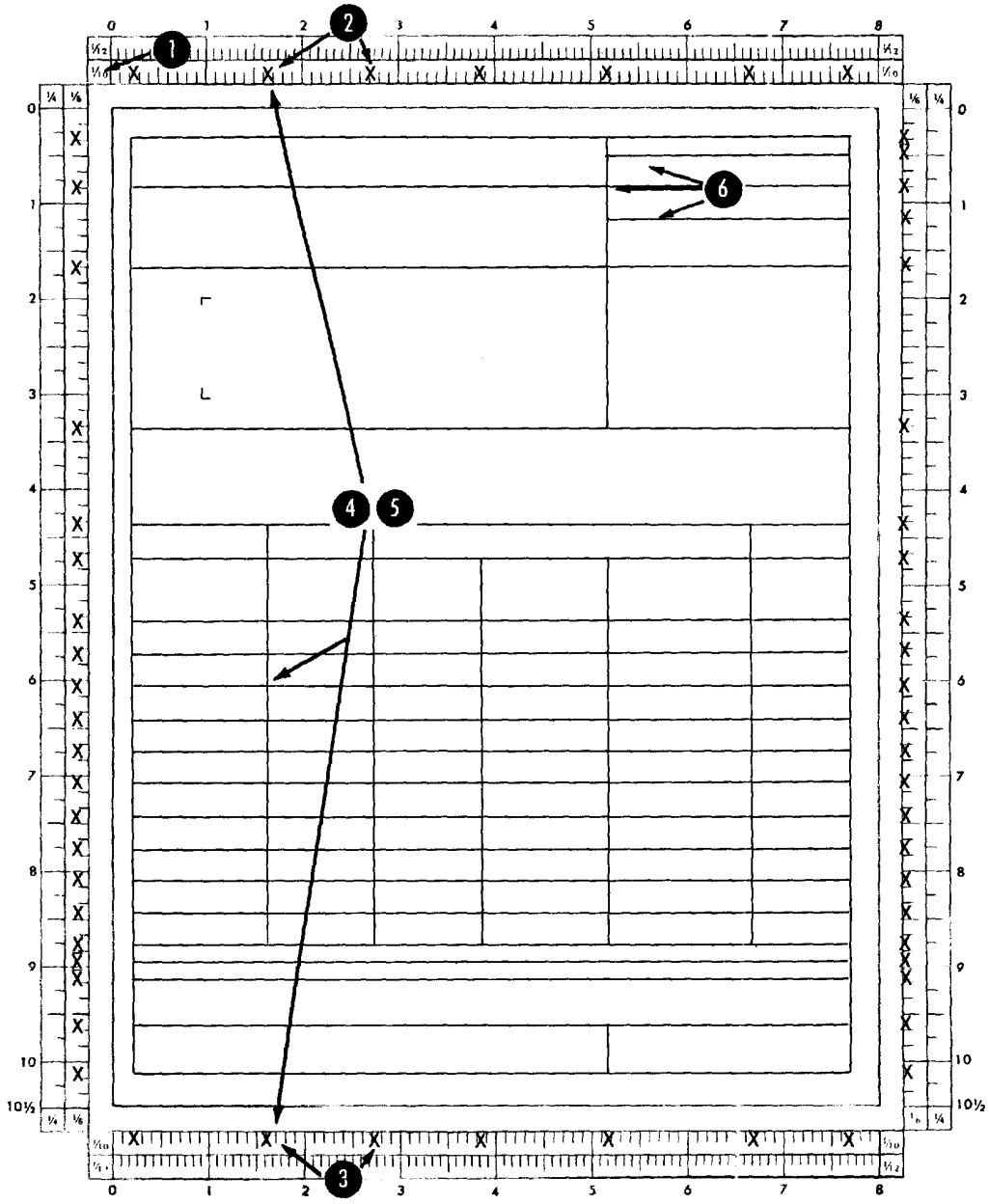
STEP 5—PLOT DOWN



1. Use scale at left and right of guide sheet.
2. Count off space down in accordance with final measurements on rough draft (i.e., Step 3).
3. Place an "X" on sixth mark on left and right scale where lines are to be drawn.
4. Line up triangle or ruler with matching "X" marks.
5. Draw lines from left to right.

Figure 7

STEP 6—PLOT ACROSS



1. Use scale at top of guide sheet.
2. Count off space across in accordance with final *measurements* on rough draft (i.e., Step 3).
3. Place an "X" on tenth mark on top and bottom scale where lines are to be drawn.
4. Line up triangle or ruler with "X" marks.
5. Draw line to separate spaces into boxes or columns.
6. Draw horizontal lines which start from a vertical "line" and not left margin.

Figure 8

STEP 7—LETTER

GENERAL SERVICES ADMINISTRATION
NATIONAL ARCHIVES AND RECORDS SERVICE
VERIFICATION OF SEA SERVICE REPLY

REFERENCE DATA
DATE OF LETTER
SEAMAN'S NAME (1)
ADDRESSED TO

RETURN TO
Chief Archivist
Industrial Records Division (1)
National Archives and Records Service
Washington 25, D.C.

MAILING ADDRESS

Attention — Although we do not have copies of seaman's maritime service discharges, we can often verify these discharges from shipping logs and articles of the United States Shipping Commissioners and Shipping Board. This can be done when the seaman served before 1939, and the information shown in section I is given. (2)
For verification of service after 1938, see Section II

Section I - INFORMATION NEEDED FOR VERIFICATION OF SEAMAN'S SERVICE PRIOR TO 1939
Columns A and B - Always filled in.
Column C or D - Complete whichever is checked.
You can get some of this information from former employers, or from alphabetical lists of owners and vehicles in the ANNUAL volumes of the "List of Merchant Vessels of the United States" and the "Records of the American Bureau of Shipping". The larger Public Libraries have these volumes (2)

[X] A	[X] B	[ ] C			[ ] D
NAMES OF VESSELS	RATINGS HELD (Each Voyage of Vessel)	DATES OF EACH VOYAGE	SIGN-ON PORT FOR EACH VOYAGE	DISCHARGE PORT FOR EACH VOYAGE	DATES OF SERVICE ON EACH U.S. SHIPPING BOARD VESSEL

(IF MORE SPACE IS needed, use REVERSE)

Section II - FOR VERIFICATION OF SERVICE AFTER 1938 (WRITE TO ONE "X"ed)

[ ] UNITED STATES COAST GUARD
MERCHANT VESSEL PERSONNEL RECORDS AND WELFARE SECTION
WASHINGTON 25, D.C.

[ ] MARITIME ADMINISTRATION
PERSONNEL OFFICER
WASHINGTON 25, DC

SIGNATURE OF CHIEF ARCHIVIST

DATE

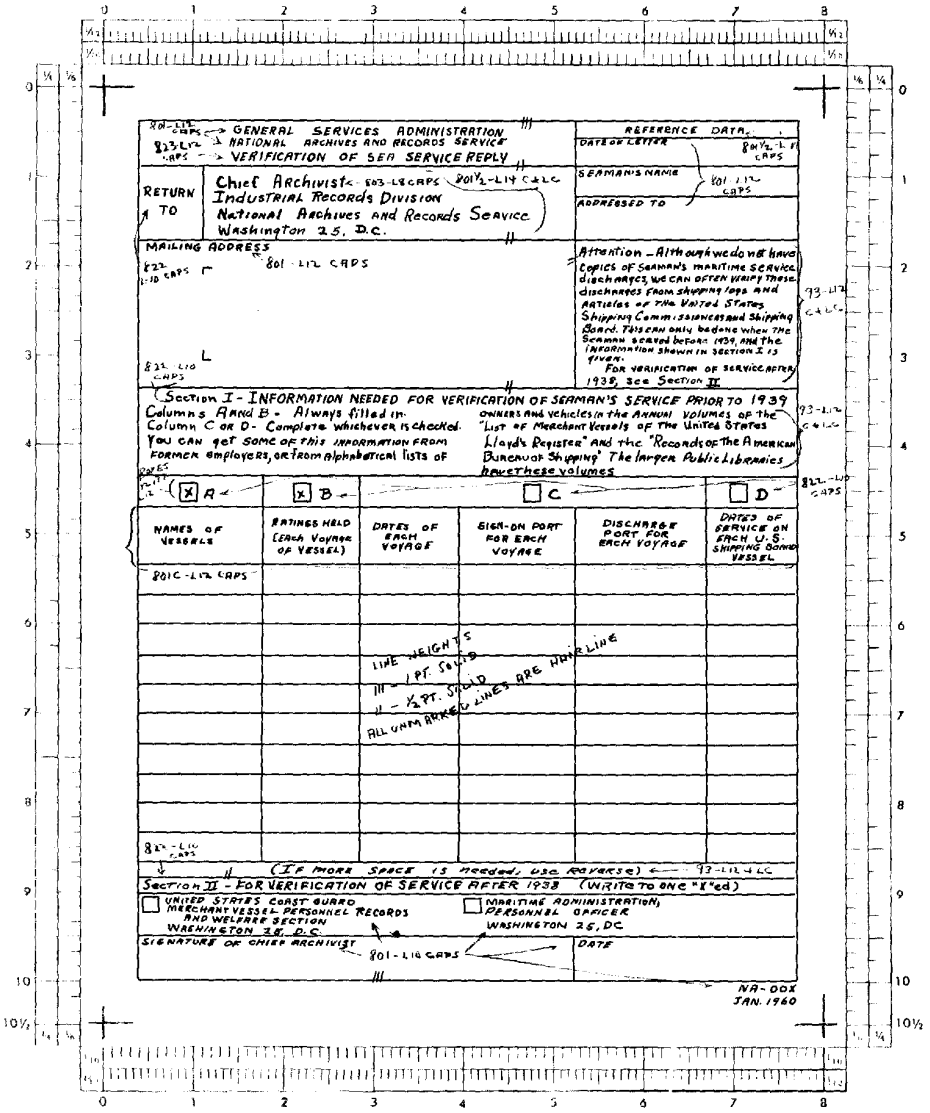
NA-00X
JAN. 1960

(1) Letter to approximate size the form captions as they will appear on the printed form.

(2) Letter instructions or other text matter as they will appear on the printed form.

Figure 9

STEP 8—MARK



1. Determine how type will be set, for example vari-type, fotosetter, letterpress.
2. Consult proper type chart.
3. Mark type for copy preparation by indicating type number or case number.
4. Consult rule weight charts.
5. Determine rule weights to be used.
6. Mark rule weights as indicated on chart.

- Write specification work sheet.
- Attach to form layout.
- Forward for copy preparation and procurement of reproduction.

Figure 10

THE PRINTED FORM

GENERAL SERVICES ADMINISTRATION
NATIONAL ARCHIVES AND RECORDS SERVICE
VERIFICATION OF SEA SERVICE REPLY

Identification

REFERENCE DATA
DATE OF LETTER

RETURN TO
Chief Archivist
Industrial Division
National Archives and Records Service
Washington 25, D.C.

Routing

SEAMAN'S NAME

Filing

ADDRESSED TO

MAILING ADDRESS

FACILITATING AREA

Mailing

ATTENTION.—Although we do not have copies of Seaman's Maritime Service Discharges, we can often verify these discharges from shipping logs and articles of the United States Shipping Commissioner or Shipping Board. This can only be done when the seaman served before 1939, and the information shown in Section I is given.

For verification of service after 1938, see Section II.

Instructions

Section I.—INFORMATION NEEDED FOR VERIFICATION OF SEAMAN'S SERVICE PRIOR TO 1939

Columns A and B.—Always filled in.
Column C or D.—Complete whichever is checked.
You can get some of this information from former employers, or from alphabetical lists of owners and vehicles in the annual volumes of the "List of Merchant Vessels of the United States," "Lloyd's Register," and the "Records of the American Bureau of Shipping." The larger public libraries have these volumes.

[X] A	[X] B	[ ] C			[ ] D
NAMES OF VESSELS	RATINGS HELD (Each voyage of vessel)	DATES OF EACH VOYAGE	SIGN-ON PORT FOR EACH VOYAGE	DISCHARGE PORT FOR EACH VOYAGE	DATES OF SERVICE ON EACH U.S. SHIPPING BOARD VESSEL

WORKING AREA

(If more space is needed, use reverse)

Section II.—FOR VERIFICATION OF SERVICE AFTER 1938 (Write to one "X"ed)

[ ] UNITED STATES COAST GUARD
MERCHANT VESSEL PERSONNEL RECORDS AND WELFARE SECTION
WASHINGTON 25, D.C.

[ ] MARITIME ADMINISTRATION
PERSONNEL OFFICER
WASHINGTON 25, D.C.

SIGNATURE OF CHIEF ARCHIVIST

DATE

Figure 11

NA-OOX
(JAN. 1960)

II. THE FACILITATIVE AREA

Every form has two jobs to do: (1) the main one which is its reason for being, namely collecting information; (2) the subsidiary one which internally assists it to do its main job. The second task we may call "facilitative."

The facilitative task requires that a portion of every form be set aside for accomplishing that task. There should thus be space for such items as: agency name, form title, number, edition date, instructions for filling in, and routing instructions on how to handle after filled in.

The area of the form devoted to the facilitative task is usually peripheral. This is illustrated in figure 11. In the handbook on *Forms Analysis* the probing incidental to the facilitative area was covered in the chapters on "Reading the Form," "Transmitting the Form," and "Filing the Form."

IDENTIFICATION

The first thing a person reads when using a form for the first time is the title, to get a quick idea of what it is about. Certainly, some kind of identification is needed to make the purpose and function of a form stand out clearly to the reader. It also facilitates the requisitioning, stocking, and issuing of forms. In addition to the title, identification includes agency name, form number, date of edition, appropriate supersession notice, and any control symbols.

Different readers, of course, emphasize different parts of the identification. A member of the public is most interested in the agency name, title, along with the form number; a stock clerk is interested in the form number, edition date, and supersession notice; a file clerk is most interested in the form number. Yet, where the identification data are placed on the form is important to all readers.

Title and Subtitle

The title is placed as shown in figure 12. Top left is used when the upper-right corner is reserved for filing data. Otherwise, it may be centered at the top. In a vertical file card where the top is reserved for filing data, the title is placed at the bottom of the card in the $^3/_6$-inch margin which is used as gripper space to hold the card in the typewriter.

On a visible index card, the title is placed at the top of the card to prevent a break in the typing sequence. If the card is first filed in a visible file and later stored in a vertical file, the title is placed just above the "visible area." The visible area is that part of the card which shows when it is filed in visible equipment.

A subtitle may be desirable for the reader to explain or qualify the main title. If, for example, there is more than one "Daily Warehouse Record," each form should be distinguished by a subtitle as, "Shipments and Receipts," centered under the main title.

Agency Name

If forms are to be filled in by the public, the name of the agency should be included with the title.

Form Number

Although some agencies require that the form number and edition date be placed in the upper-left with the title, for most practical purposes the lower-right or lower-left margin is most advantageous, for the following reasons:

- Prevents tearing into or obliterating the number when a form is stapled in the upper-left corner.
- Permits the form number to be seen readily when forms are bound at the top.
- Serves as an aid in stocking, particularly when forms are stocked in small quantities in supply cabinets.

There is an additional advantage in placing the form number in the lower-right corner. The number can be seen readily when forms are filed in folders in upright filing cabinets.

PLACEMENT OF TITLE

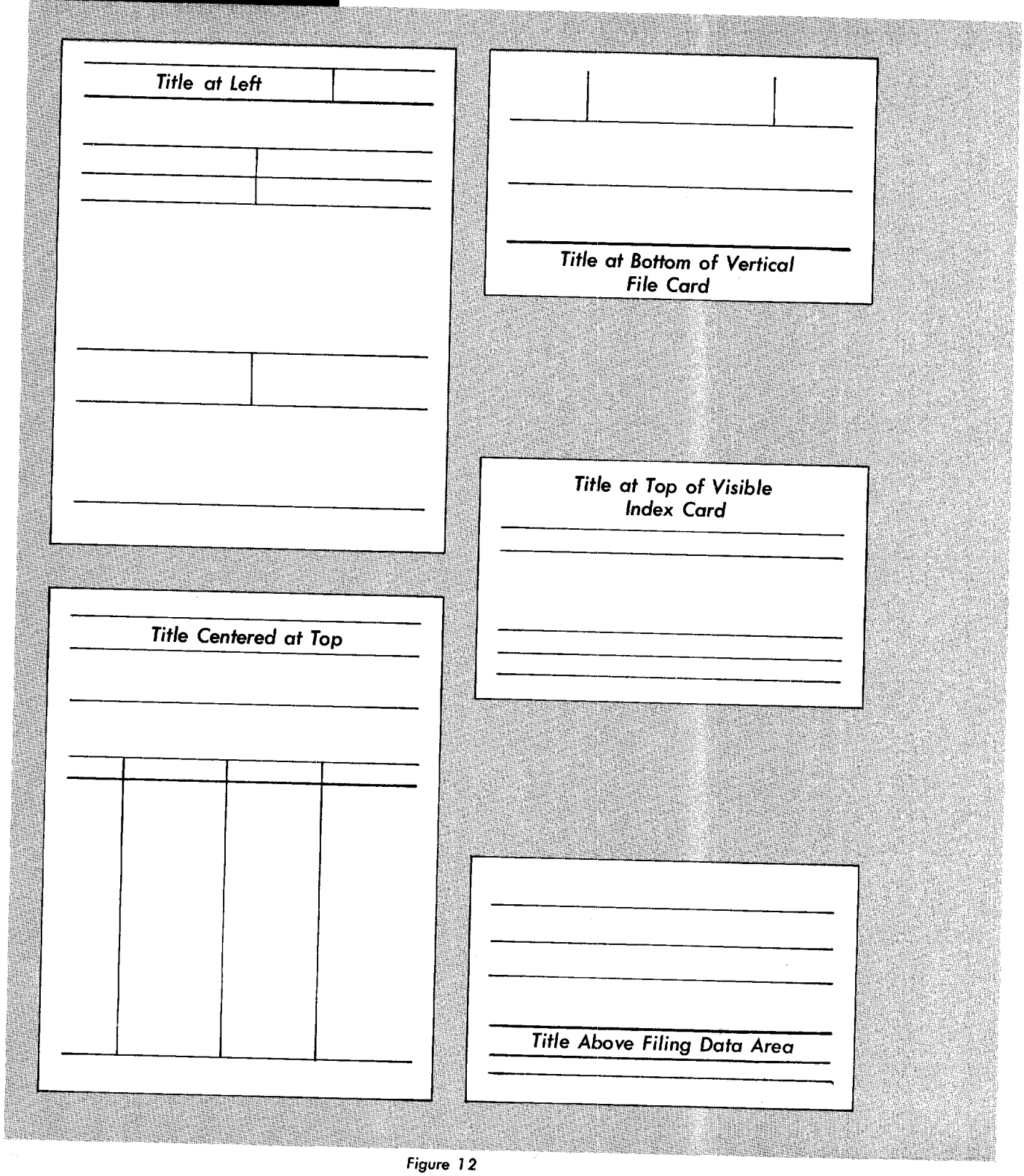


Figure 12

On certificates (discharge, retirement, registry, and the like), the number should be printed in a small type face so as not to detract from the appearance. The number also should be placed so it will not interfere with the limited working area.

When a form consists of separate sheets, the form number should appear on each sheet. Thus, if one sheet is separated from the others, it is quickly identified. When a form is printed on front and back, the form number also should appear on the back. This aids the printer in backing up the face of the form correctly.

Edition Date

Good forms practice requires each form to show an edition date. Edition dates are valuable for reference purposes in writing procedures, in ascertaining whether the current edition of a form is being used, in advising users if old editions of a form may be used, and in the disposition of obsolete stocks. They are placed with the form numbers.

Page Identification

When a form consists of multiple pages, folded or stapled, page numbers help to:

- Aid the printer in the assembling of material for printing and in the collating of material after printing
- Key instructions to the form
- Identify the form, particularly when pages of the form are separated to fill in or process

The page number is usually placed in the upper-right corner.

When continuation sheets are used for the completion of a form and the number of such pages to be used is unknown at the outset (as in requisition and purchase order forms), each page should be numbered as shown: "Page 1 of — pages, Page 2 of — pages." The total number of pages is entered in the blank spaces by the person completing the form.

Supersession Notice

It is helpful to have a method of notifying users and those in charge of supply rooms and depots when an existing form is revised, when two or more forms are consolidated, or when an existing form or forms are replaced by a new form. For this purpose, a supersession notice may be printed in the bottom margin of the form.

A supersession notice should specify whether or not existing stocks of the replaced form may be used. If the existing stocks cannot be used, and if the new form has a different number, the number and date of the replaced form should be included in the supersession notice. If a sizeable number of forms are superseded by one form, a separate notice may be more appropriate to inform interested personnel of the change. This is to avoid giving the form a cluttered look. There also may be space limitations which would not permit a lengthy notice.

Some ways of wording a supersession notice are shown in figure 13.

When Revising an Existing Form, Use:

- Previous editions are obsolete.
- Previous editions may be used until supply is exhausted.
- Existing stocks of (form number and edition date) will be used.
- Existing stocks of (form number and edition date) will not be used.

When Replacing an Existing Form with a Different Number, Use:

- Replaces (form number and edition date) which is obsolete.
- Replaces (form number and edition date) which may be used until supply is exhausted.

For a Combination of the Above Supersession Notices, Use:

- Existing stocks of (form number and edition date) will be used.

  Replaces (form number and edition date) which is obsolete.

Figure 13

Control Symbols

When a form is subject to approval by the Bureau of the Budget or the Comptroller General, space should be provided for the approval number or legend. Although not discussed in this handbook, many agencies have reports control symbols which are placed on all forms serving as internal reports.

Federal Report Forms. Forms which result in the collection of information on identical items from 10 or more persons other than Federal employees require clearance and the assignment of an approval number by the Bureau of the Budget in the upper-right corner of the form. This is in accord with the Federal Reports Act of 1942 (5 USC 139) and Bureau of the Budget Circular No. A–40.

When no time limit is assigned to the use of the form, the following style is used:

Form Approved
Budget Bureau No. 00–R00

When a time limit is assigned to the use of the form, the following style is used, unless the Bureau of the Budget specifies otherwise:

Budget Bureau No. 00–R00
Approval Expires (date)

Forms Approved by the Comptroller General. Certain standard fund accounting forms are prescribed by the Comptroller General under the authority of Section 309 of the Budget and Accounting Act of 1921. Agency accounting forms developed for use in lieu of standard forms require advance approval of the Comptroller General.

Fiscal forms for internal use within the agency, which do not support the accounts of disbursing or other accountable officers, need not be submitted for advance approval of the Comptroller General (9 GAO 1000). Approval of the Comptroller General is indicated by the legend "Form approved by the Comptroller General, U.S." and the date.

Seals and Photographs

Before placing a facsimile of the agency seal on any form, the use of the insignia must have been authorized or approval must have been obtained by the office initiating the form. Facsimile of seals can provide an additional means of identifying the issuing agency to the public. They also lend dignity and official sanction to important documents such as identification cards, discharge certificates, commissions, and certificates of award.

The Civil Service Commission urges Federal agencies not to require photographs on personnel forms used within the agency. Photographs are not to be used on any forms submitted to the Commission (Federal Personnel Manual, A6–27, Transmittal Sheet 601, 7–11–58).

READABILITY

As a person struggles to grasp the content of a form, he responds favorably or unfavorably, depending on its appearance and readability. Appearance and readability, in turn, depend a great deal upon the typography, substance and color of paper, and color of ink in which the form is printed. The subject of typography is treated in chapter IV. Paper and ink are discussed in chapter V.

INSTRUCTIONS

Proper instructions aid the reader in interpreting the form so that he may give accurate answers or efficiently process the form.

Brief Instructions

Brief general instructions are placed at the top of the form below or near the title to tell the reader immediately:

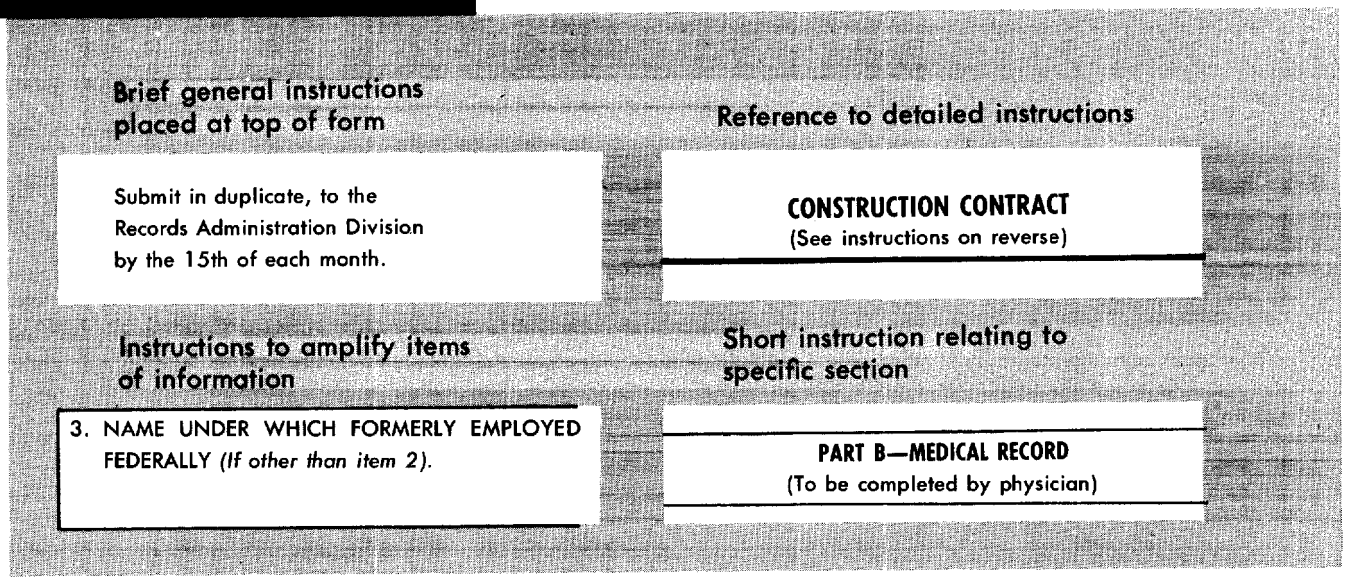
- How many copies are required
- Who should submit the form
- Where, when, and to whom copies should be sent

If detailed instructions appear elsewhere, reference should be included in the brief general instructions.

Instructions to amplify items of information or column heads should be placed in parentheses after the item or head. Short instructions

WHERE TO PLACE INSTRUCTIONS

BRIEF INSTRUCTIONS



LENGTHY INSTRUCTIONS

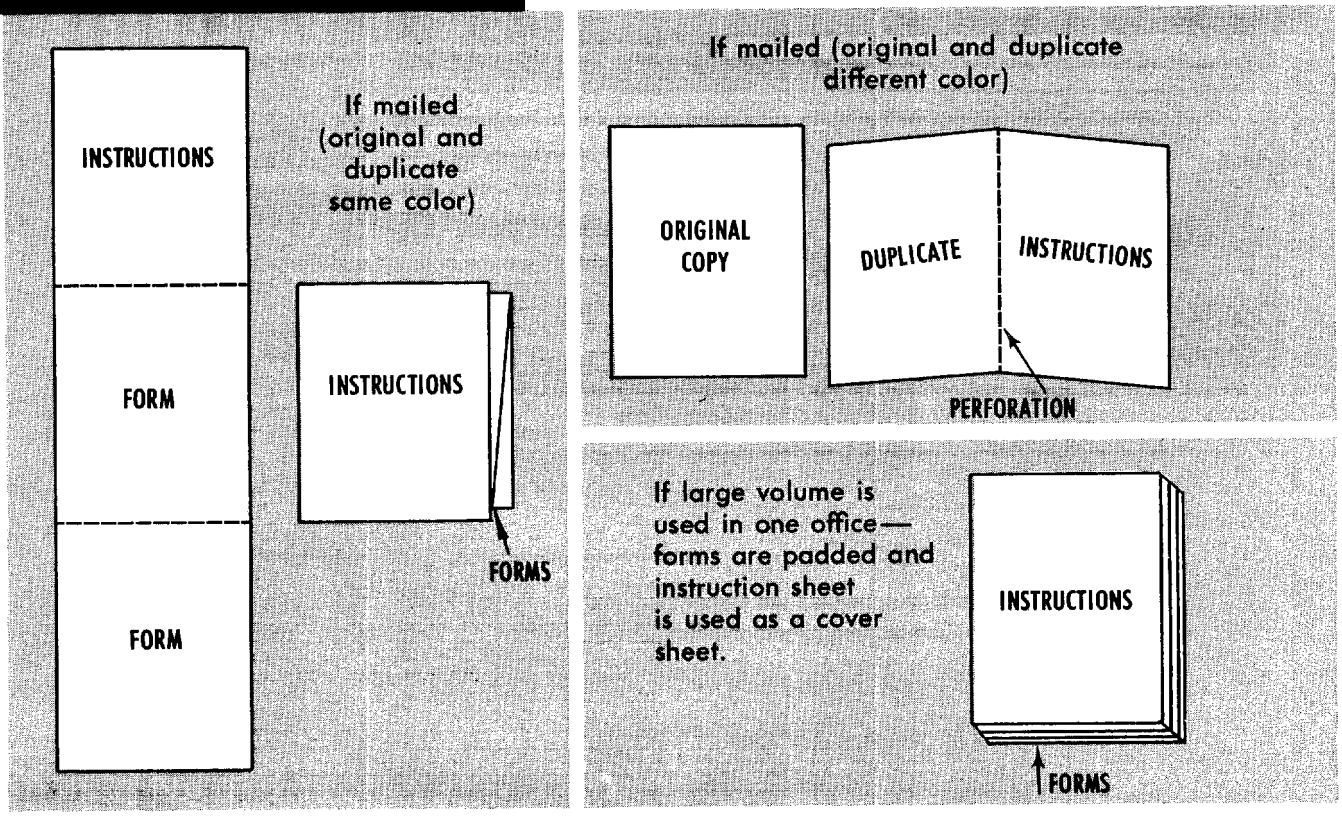


Figure 14

which relate to a specific section should be placed with the section head. These points are illustrated in figure 14.

Lengthy Instructions

Lengthy instructions are placed:

- On the front of the form if there is sufficient space for both instructions and fill-in data
- On the back of the form if there is not enough space on the front
- On a separate sheet, or in a booklet
- In an administrative issuance in accordance with the style and format prescribed by the agency

In no instance should instructions be placed among entry spaces which need to be kept free to expedite fill-in. If the form is printed front and back, all entry spaces should be put, if possible, on the front of the form. This eliminates turning the form over to fill in and process it.

Wide word spacing must be guarded against in lengthy instructions. It results in white gashes (gutters or rivers of white) which give the type mass a mottled color and interrupts reading. Because of the disproportionate spacing, numerous words in figure 15 are more closely related to words in the lines above and below than to the words that precede and follow. This can occur in text type forms, instructions on forms, or instructions in a separate issuance.

A designer pursues these objectives by striving for a precise balance of print and white space. First, he chooses a style and size of type that is readable. Second, he examines type fitment in relation to column width; and he effects the necessary adjustments in column width or type size to allow snug spacing with a minimum number of hyphens at the ends of the lines. Third, he defines the spacing that should be put between the assembled lines of type to give the mass a suitable and uniform tone.

Figure 15

Snug spacing between words makes each line an unbroken sequence that may be read easily. Note how the same words used in figure 15, when properly spaced, reduce the rivers of white to mere trickles and result in a more uniform and eye-appealing type mass. See figure 16.

A designer pursues these objectives by striving for a precise balance of print and white space. First, he chooses a style and size of type that is readable. Second, he examines type fitment in relation to column width; and he effects the necessary adjustments in column width or type size to allow snug spacing with a minimum number of hyphens at the ends of the lines. Third, he defines the spacing that should be put between the assembled lines of type to give the mass a suitable and uniform tone.

Figure 16

Type set too solid makes difficult reading. This is because of insufficient white space between lines as shown in figure 17. When lines are opened up, comparable to figure 18, readability increases with less strain on the reader. Be careful not to have too much space between the lines, as excessive spread causes the eye to tire from the optical exercise required.

"The fundamental purpose of printing is to be read, but sometimes it is designed so poorly that it defeats its purpose. Before the artist begins to design a piece of printing, he must understand its purpose and the ideas it is intended to convey. It is to be purely informa-

Figure 17

"The fundamental purpose of printing is to be read, but sometimes it is designed so poorly that it defeats its purpose. Before the artist begins to design a piece of printing, he must understand its purpose and the ideas it is intended to convey. It is to be purely informa-

Figure 18

Figure 14 illustrates some ways to attach lengthy instructions to forms.

For maximum readability, a 10- or 12-point Roman type is best for the instructions. But when space is limited, it may be necessary to use an 8-point type. When instructions are keyed to the form, better readability is attained if the reference items or paragraph lead-ins are set in italic or bold face type as demonstrated in figure 19.

Figure 20 shows how to prepare instructions for the form layout.

WAYS OF PRESENTING INSTRUCTIONS FOR READABILITY

ITEM 5.—PERSONNEL AND PAYROLL

	Dollars	
a. Total payroll for the year 1954, before payroll deductions		
	Number of employees	Payroll (dollars)
b. Paid employees and payroll for the workweek ended nearest November 15, 1954		
		Number
c. Number of paid employees for workweek ended nearest:		
(1) March 15, 1954		
(2) May 15, 1954		
(3) August 15, 1954		
d. Proprietors or partners ment 15 hours or more nearest November 15, 1		
e. Number of salesmen		

Instructions keyed to items on form for easier reading

ITEM 5.—PERSONNEL AND PAYROLL

Include payments to corporation officers and executives working in this establishment. **Do not** include salaries or withdrawals (whether in cash or kind) of proprietors or partners of unincorporated businesses.

For purposes of this item, the workweek ended nearest the 15th of the month should be one ending in the period of the 12th through 18th inclusive.

Line a.—Report the full amount of salaries, wages, bonuses, vacation allowances, and commissions before deductions for Social Security, income tax withholding, insurance, dues, etc.

Line b.—Include both full- and part-time employees. If your payroll is for a period other than a week, please adjust the figures to a 1-week basis. Commissions paid on other than a weekly basis should also be adjusted to a 1-week basis.

Lines c(1)-(3).—Include both full- and part-time employees.

Line d.—To be reported by proprietorships and partnerships only.

Line e.—Include all persons engaged in making sales.

BEFORE AND

Read the certificate at the end of this questionnaire before completing your answers. *Print* or *Type* all answers. All questions and statements must be completed. If proper answer is "no" or "none" so indicate. Fill out, sign, and return to requesting agency. If more space is required, use remarks section.

AFTER

Outline instructions easier to read than paragraph instructions

1. Read the certificate at the end of this questionnaire before completing your answers.
2. PRINT or TYPE all answers. All questions and statements, must be completed. If proper answer is "no" or "none," so indicate.
3. Fill out, sign, and return to requesting agency.
4. If more space is required, use remarks section.

Figure 19

HOW TO PREPARE INSTRUCTIONS FOR LAYOUT

The hand lettering of lengthy instructions on the form layout is not necessary. An easy way to determine space and prepare copy follows:

1. Decide on the width of the printed column, the size of type to be used, and the number of characters in the printed column width. For example, a column 3½ inches wide to be set 14 characters to the inch will result in a column of 49 characters (14 characters to the inch multiplied by a column 3½ inches wide). On a separate sheet of paper, type the instructions double spaced, the width of the printed column or 49 characters.

2. To determine the length of the printed column, divide the number of typewriter lines down the page by the number of lines to the inch of the selected type. For example, if there are 56 typewritten lines and the type face measures 7 lines to the inch, including space between paragraphs, the length of the printed instructions will be a single column of 8 lines (56 divided by 7), or a double column of 4 lines.

3. With a blue pencil or a broken line, outline on the form layout the area in which the instructions are to be printed. To tie together the typewritten copy and the outlined area on the form layout, mark the typewritten copy "Copy A" and the outline on the form layout "See Copy A". If additional sets of instructions which appear elsewhere in the form, mark the typewritten instructions "Copy B, C and so on," and the outlined areas on the form layout accordingly.

LAYOUT

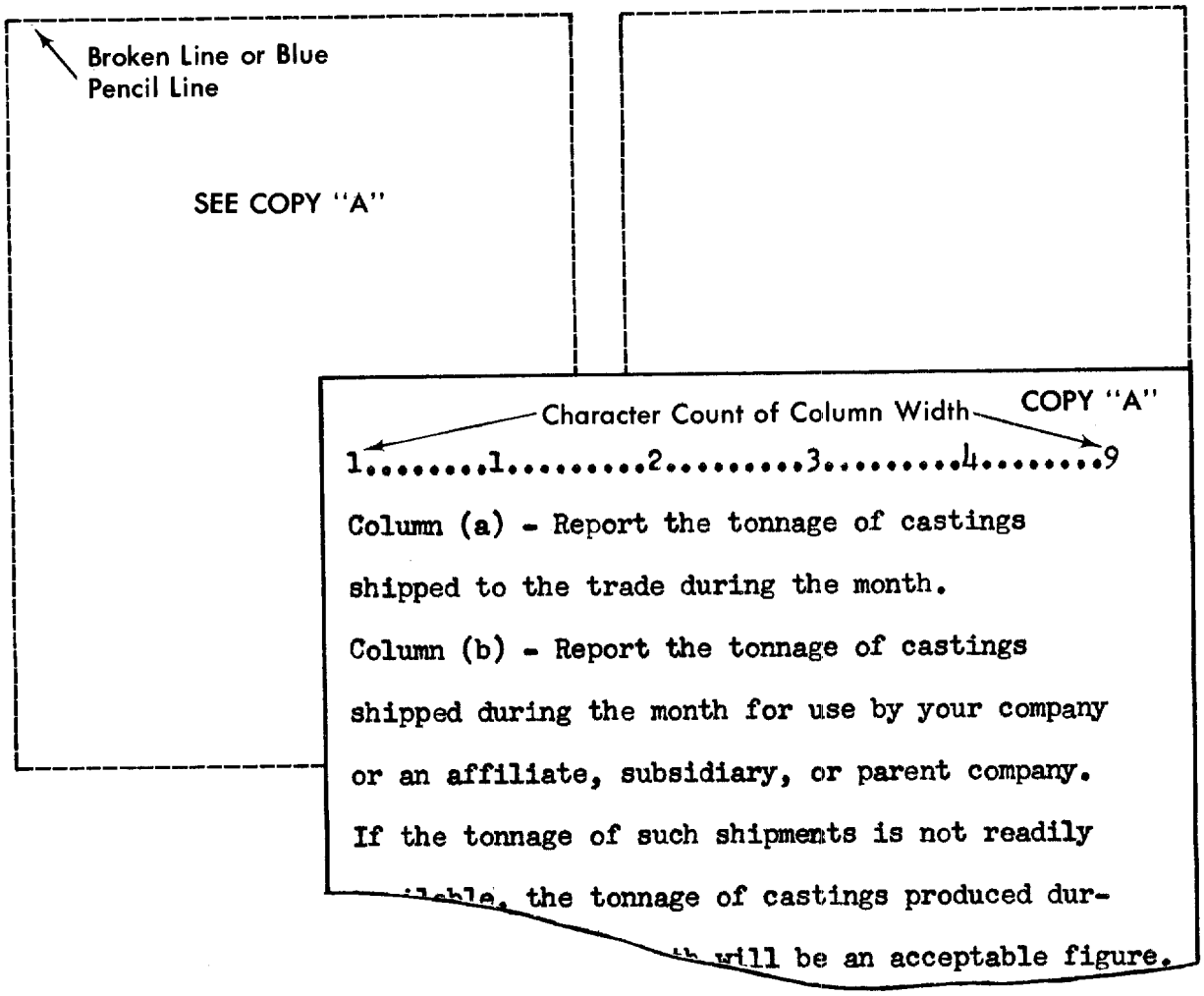


Figure 20

ROUTING

The application of effective routing and mailing design techniques reduce and simplify handling of papers. In addition, they reduce chance of error. Finally, they speed delivery of mail.

Whenever possible, a form should allow space in which to identify the addressor and the addressee. In this way, it becomes self-routing—a transmittal letter or routing slip is unnecessary. Some ways of placing the routing information are described below and are shown in figure 22.

"To" and "From" boxes may be placed:

- On one line across the form
- One under the other
- One at the top and the other below in the space customarily used for a signature

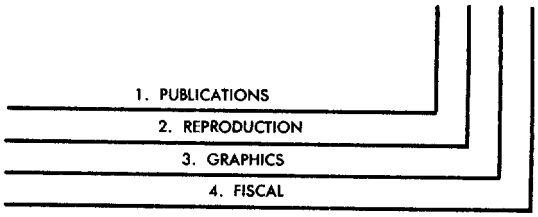
Routing information in the spaces captioned "To" and "From" is preprinted when the information remains constant. The spaces may be left blank for fill-in where the information varies each time.

When routing information is preprinted, it is usually office or position titles rather than names which are more likely to change. One change in personnel could obsolete an entire stock of forms—an expensive blunder.

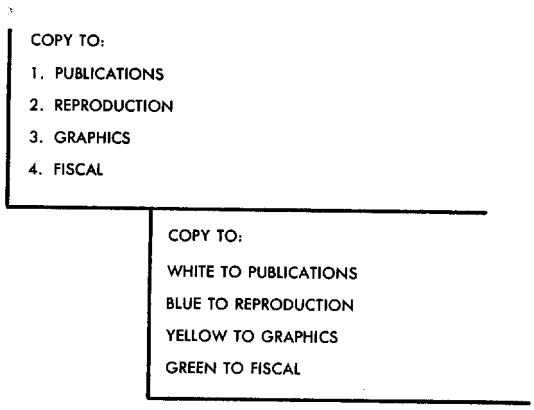
When addressing a form for multiple routing where the routing remains constant, the entries are preprinted without X-boxes, but they may be numbered. The order in which the addresses are printed should correspond to the workflow.

When routing a form to more than one address (multiple routing) and the addressees vary from time to time, the offices addressed may be preprinted with X-boxes beside them. The addressor then enters an "X" in the box beside the appropriate address.

Copy Routing. If the distribution of carbon copies is to appear on the form, it is usually placed at the bottom. Printing the distribution in full on the original and all copies is more economical than printing the individual routing instructions on separate copies. See figure 21.



Copy routing printed on each copy



Copy routing printed on all copies (Eliminates press changes)

Figure 21

With distribution in full, all copies can be printed from one plate, there is no need to collate the form into sets, and those concerned will know what distribution is made of the form.

Another method used to indicate the distribution of carbon copies is color identification. Copies of the form are printed on different colors of paper and, in the distribution information, each color is designated for a particular addressee.

MAILING

Whether a form is designed for window mailing or as a self-mailer depends upon the method of addressing, the accompanying papers, and the volume. When considering the mailing plan, current postal manual regulations should be carefully checked.

Window Envelope Mailing

Postal regulations for mailing in a window envelope are shown in figure 23. Although

ROUTING

TO/FROM ARRANGEMENT

ONE AND TWO LINE VARIABLE FILL-INS

TO	FROM

Place at Top Under the Title

TO	
FROM	

Place at Top Left Under Title

TO

Place at Top of Form

FROM

Place at Bottom of Form

ONE LINE PREPRINTED CONSTANT ROUTING

TO	FROM
PUBLICATIONS DIVISION ATTN: PUBLICATIONS CONTROL OFFICEER	

Note Preprinted Titles Instead of Names

TO	FROM
	DIRECTOR, OPERATING FACILITIES

Placed at Top Under Title

FROM/TO ARRANGEMENT

Placed at Top Left Under Title

2. FROM

3. ROUTING

☐ TO ADMIN. DIVISION ☐ THROUGH ADMIN. DIV. TO ADJUDICATION DIV. ☐ TO ADJUDICATION DIVISION

PREPRINTED MULTIPLE ROUTING

TO *(Route in Order)*		
	1	EASTERN PUBLICATIONS DEPOT
	2	PUBLICATIONS CONTROL OFFICER
	3	FORMS CONTROL STAFF
	4	WESTERN PUBLICATIONS DEPOT

Same Routing in All Cases

TO: *("X" Proper Box)*

☐ REPRODUCTION BRANCH
☐ GRAPHICS BRANCH
☐ FISCAL DIVISION

Routing Not Constant in All Cases

Figure 22

window envelopes cost slightly more than regular envelopes, their use prevents delays or non-delivery of form since it:

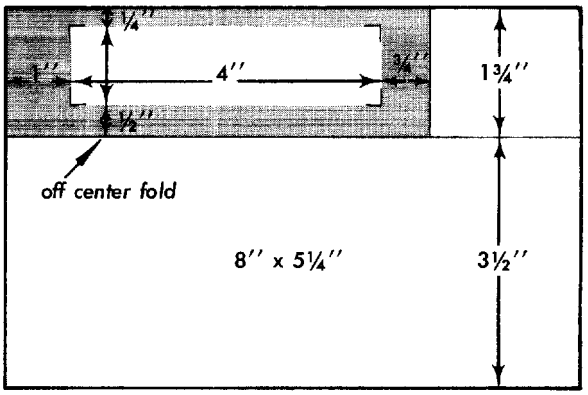
- Eliminates the addressing of envelopes
- Avoids mailing a form in the wrong envelope
- Precludes the possibility of errors in transcribing names and addresses from forms to envelopes

POSTAL REGULATIONS PROVIDE

1. The address window must be parallel with the length of the envelope.
2. The proper place for the address window is in the lower portion of the address side.
3. Nothing but the name, address, and key number used by the mailer may appear through the address window.
4. The return address should appear in the upper-left corner. If there is no return address and the delivery address does not show through the window, the piece will be handled as dead mail.
5. The address disclosed through the window must be on white paper or paper of a very light color.
6. When used for registered mail, envelopes must have panels covering the opening. If transparent panels are glued to the envelopes, they may contain only matter without intrinsic value. If the panel is part of the envelope, the envelope may be used for all registered mail.

Figure 23

Standard Window Placement. A space 4 inches wide by 1 inch deep will accommodate most addresses and allow maximum utilization of space for the content of the form. This space will register with an envelope window of 4 by 1⅛ inches as shown in figures 24 and 26. Figure 25 shows the standard size forms that fit into an 8⅞ by 3⅞ inch envelope which is the one most commonly used.



Shaded area shows clearance space for shifting of paper in envelope.

Figure 24

STANDARD SIZE FORMS THAT FIT AN 8⅞" x 3⅞" ENVELOPE

SIZE	FOLDS
8" x 10½"	2
8" x 7"	1
8" x 5¼"	Off Center
8" x 3½"	None

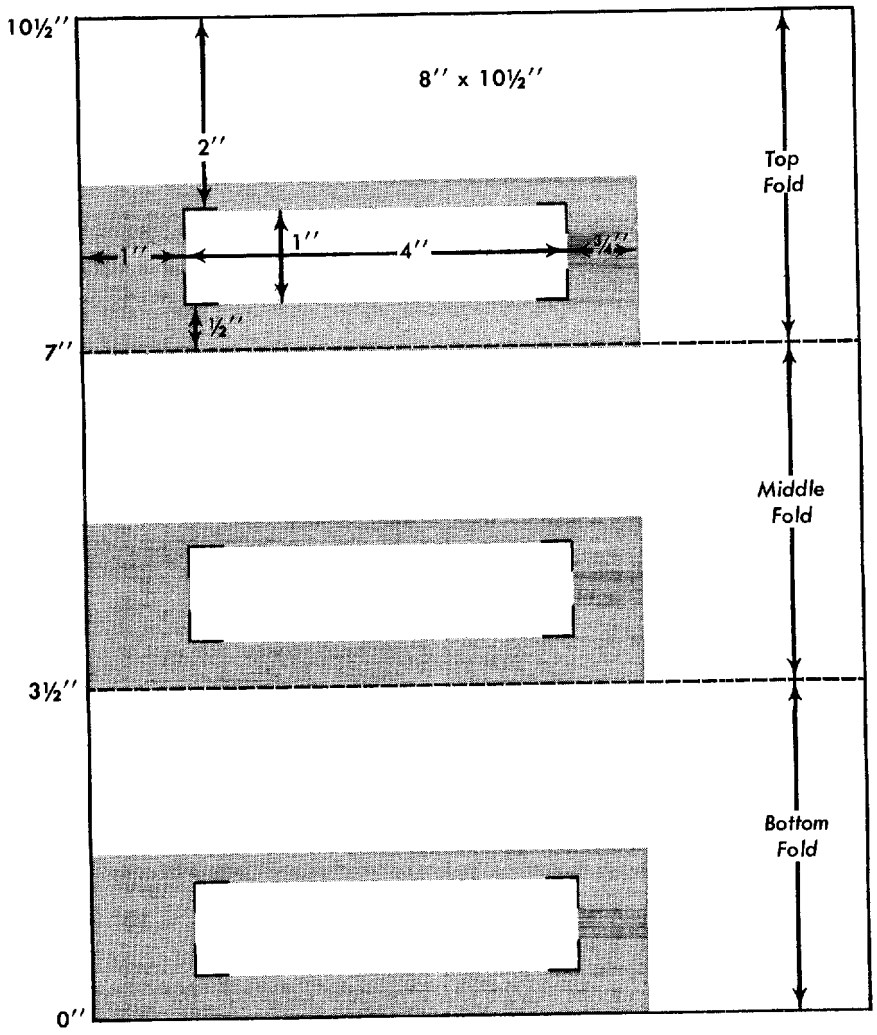
Figure 25

The standard place for the window is on the left side. However, envelopes are available with the window on either the right or the left side. Also conditions may justify placing the window elsewhere. Envelopes with windows placed in unusual positions or those of a special size are costly and require the approval of the Post Office Department. Supply considerations require that the different types of envelopes be kept to a minimum.

The envelope size, window position, and addressing method must be known before beginning to design the form so that the address area on the form may be alined with the window when the form is folded and inserted in the envelope.

The address area is positioned first on the design guide sheet and the content of the form

STANDARD PLACEMENT OF WINDOW AREA



Shaded area shows clearance space for shifting of paper in envelope.

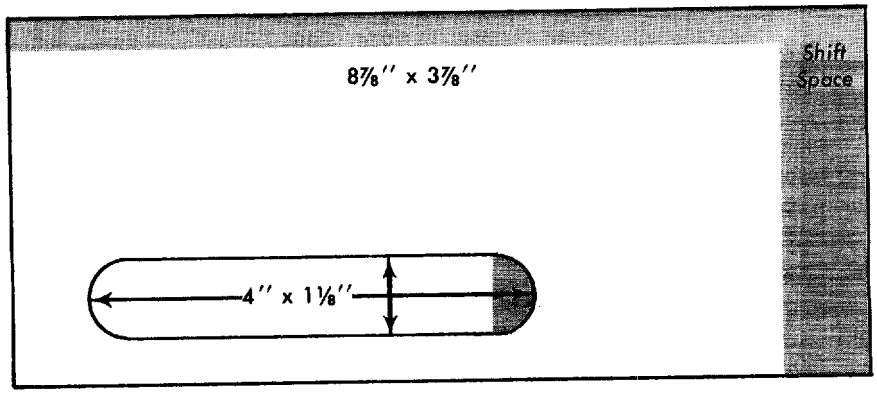


Figure 26

is designed around it. If the form is to be filled in by typewriter, particular care must be taken to insure that typewriter spacing is maintained above, within, and below the window area.

On a form which provides for a typewritten address, the space opposite may contain instructions rather than fill-in data, since this poses no problem for the typist. Whenever fill-in material is placed across from the address, the typist will find that when the address is completed she must then roll the form back to the first line to be filled in opposite the address area.

Multiple Mailing. A form can be designed for multiple mailing. For example, one address area may be placed at the top for the recipient's name and address, and one at the bottom containing the originator's name and address. To return the form in a window envelope, the addressee simply refolds it. He inserts the form in the envelope so that the originator's address is exposed in the window. The originator's address may be preprinted to save typing time.

Address Changes and Errors

In most instances when forms are preaddressed mailing lists have to be kept up to date. A statement immediately above or below the window space on the form, asking the respondent to correct the address, similar to that in figure 28, helps to maintain the accuracy of the list.

If the form is not preaddressed, but is filled in by the respondent, a direct question asking "Is this a change of address?" can help to keep the mailing addresses up to date. See figure 27.

1. NAME AND ADDRESS OF INSURED *(Type or print)*

FIRST NAME	MIDDLE NAME	LAST NAME
NUMBER AND STREET OR RURAL ROUTE		
CITY OR P.O., ZONE NO., AND STATE		

*Is this a change of address ☐ Yes ☐ No

Figure 27

PREADDRESSED FORMS

ACME COMPANY
JOHN DOE & CLARK
ATT. OF MR. DOE
312 ANY STREET
WASHINGTON, D.C.
4753 V 2602975340

(Please correct any errors in above name and address, and enter postal zone, if any)

MR. JOHN DOE
312 ANY STREET
WASHINGTON 5, D.C.

(Please correct if name or address has changed)

(Please correct any error in name or address)

ACME COMPANY
JOHN DOE & CLARK
ATTN. MR. DOE
312 ANY STREET
WASHINGTON 5, D.C.

Figure 28

Combined Routing and Window Mailing

The mailing address, return address, and internal routing may be placed on the form to aid both sender and receiver. Figure 29 shows how the name of the agency can be printed immediately above the window space on the form. This tells the respondent where to return the form. Once it has been returned and received by the agency, the clerk in the mail room is informed how to sort and where to route the form.

When the form is sent from and returned to one of several points, the return addresses may be placed above the window space on the form, using the X-box technique. The sending office checks the box beside the address to which the form is to be returned, as done in figure 30. The respondent then knows where the form is from and, if necessary, where to return it.

TO: Bureau of the Census, Government Division
Washington 25, D.C.

FROM:

(Please correct if name or address has changed)

Figure 29

FROM (Veterans Administration Office checked below)

☐ Veterans Administration
District Office
P.O. Box 7787
Philadelphia 1, Pennsylvania

☐ Veterans Administration Center
Denver Federal Center
Denver 2, Colorado

TO:

Figure 30

Self-mailers

Using envelopes and inserting forms in them may be eliminated by using "self-mailers." They can be used under the following conditions:

1. The pieces should be folded flat, including those made up in State bundles, so the open edge is at the bottom when reading the address. Pieces folded to letter size aid distribution by postal employees. If possible, pieces should be folded to a size no larger than 9 by 12 inches.
2. Pieces should be fastened by a small sticker or a single wire stitch or staple on the longest open edge *except* in *quantity mailings* where all pieces having the same post office in the addresses are placed in a bundle.
3. A clear rectangular space, not less than 3 by 5 inches, should be provided on the "self-mailer" for return address, penalty or postage indicia, name and address of addressee, postal endorsements and other pertinent matter.
4. The paper should be of sufficient weight to facilitate handling by postal employees.

Some ways to assemble self-mailers are shown in figure 32.

Post Cards. Post card sizes are governed by specifications contained in the Postal Manual. Sizes are no larger than 3 9/16 by 5 9/16 inches, or no smaller than 2¾ by 4 inches. For multiple mailing, two post cards or more may be attached by a horizontal perforation. One of the cards is detached by the respondent and returned as a reply. The return address is preprinted, thus reducing writing by the respondent.

If the respondent is to pay the postage on a return reply, the self-mailer or multiple mailing post card should show where to affix the stamp and the amount of postage.

Shipping Tags. Shipping tags are widely used in Federal industrial activities. They are stocked by manufacturers in the eight standard sizes sketched in figure 31. The hole in the tag is usually 5/16-inch. Since they are a specialty item, their many uses are discussed in detail in the Records Management Handbook, *Specialty Forms*.

SHIPPING TAG SIZES

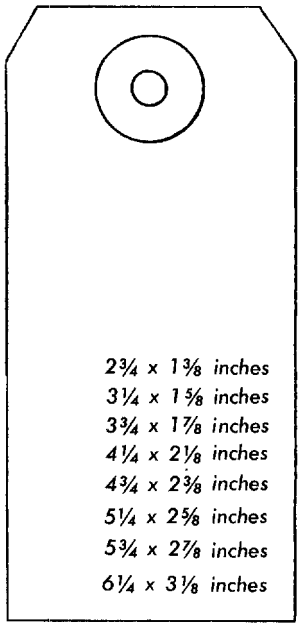


Figure 31

WAYS TO ASSEMBLE SELF-MAILERS

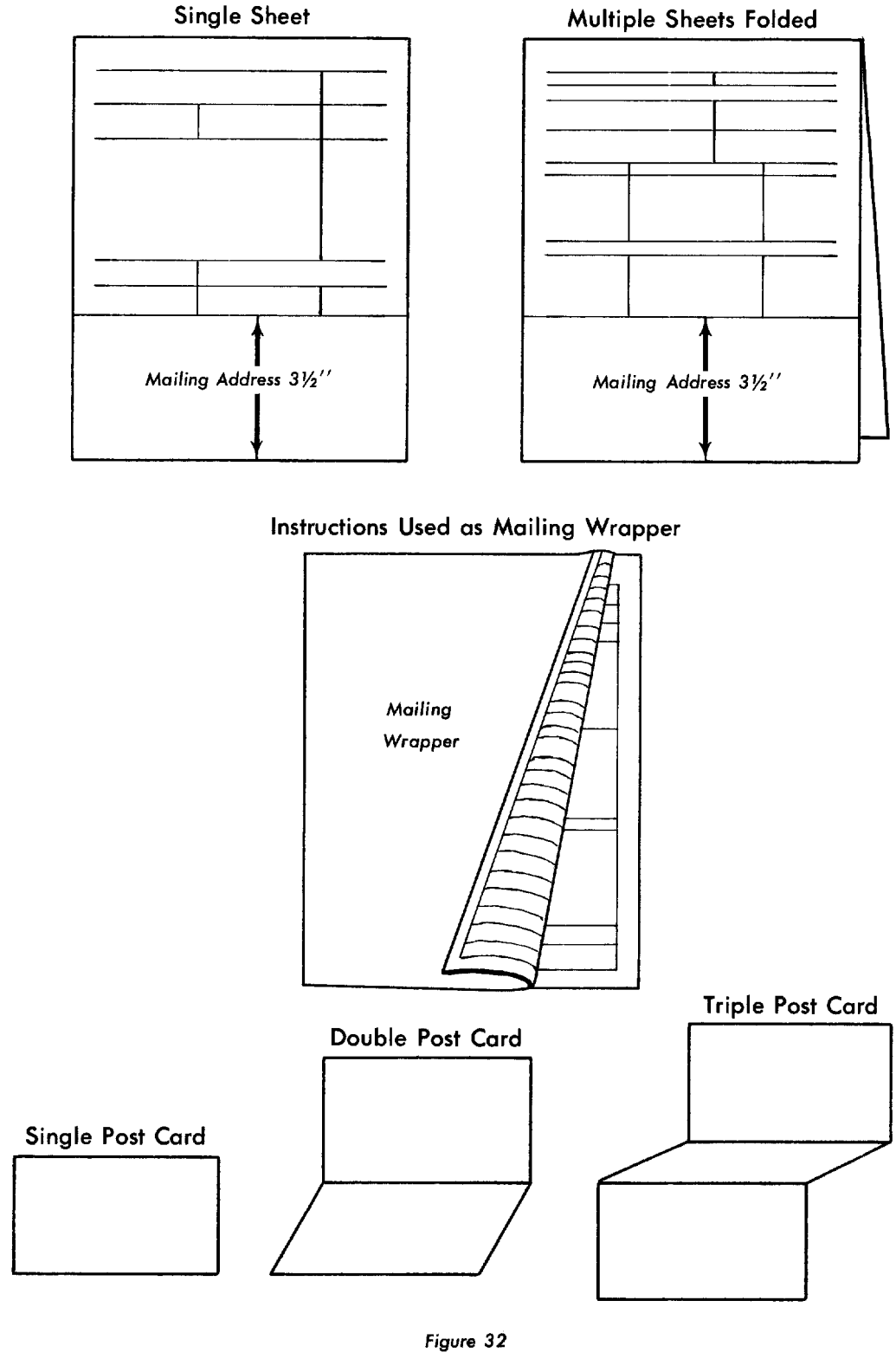


Figure 32

LOOSE FILING

The filing or reference information on a form is usually a name, a serial number, or a date. To facilitate filing and finding, good design calls for one or more items to be placed where they can readily be seen in the type of filing equipment used. To draw attention to filing data, a bold rule around the box containing the reference is frequently helpful.

File or reference data are placed at the top of the form preferably at the right, when the form is filed loose in an upright folder. Figure 33a shows how, in this position, they are the first items seen. Also, most persons use the right hand to riffle through the forms when searching for particular documents. When two or more references are needed, they are placed at the ends of successive lines.

BOUND FILING

When forms are to be filed in a prong folder or in a binder, marginal requirements as well as the placing of filing data are affected in the ways shown in figure 33b. The margin must be wide enough so that the necessary punching, binding, or both, will not obscure any of the information on the form. As discussed below, forms should be designed to fit standard-size commercial stock binders and folders, as they are less costly than nonstandard ones.

Prong Folder

Forms may be fastened at the top, bottom, or sides of a folder. The location of filing data and the allowance for a binding margin vary accordingly.

Top Binding. When a form is fastened at the top, it may be helpful to place the filing information at the bottom of the form. A ⅛-inch to 1-inch top margin is allowed.

Bottom Binding. When a form is fastened at the bottom, the filing information is placed at the top, as for loose filing. A ⅛-inch to 1-inch bottom margin is allowed.

Side Binding. The place for filing data and the binding margin are the same as for a form designed for a ring binder.

Post Binders

The filing data are placed in the upper-right corner. The size of the binding margin depends upon the capacity of the binder.

Binder Capacity	*Binding Margin*
1 to 1½ inches	1⅛ inch
2 to 2½ inches	1½ inch
3 to 4 inches	2 inches
5 inches	2¼ inches

The binder most commonly used is the 2-inch size which requires a 1½-inch margin.

Ring Binders

Filing data are placed at the top in the upper-right corner. Forms are bound on the left. A minimum $\frac{5}{10}$-inch binding margin is allowed.

VERTICAL FILE CARDS

Filing data are placed at the top of an upright file card, preferably in the upper-left corner, where they are readily visible when the file is searched. See figure 33c. Titles or other information should be clearly separated from the filing data.

If the file reference is lengthy, the box caption may be placed in the lower left of the box (instead of the upper-left corner) so that the filing data can be more readily seen. In other words, the box caption should not overshadow the filing data. Sizes most commonly used are 5 by 3 inches and 8 by 5 inches.

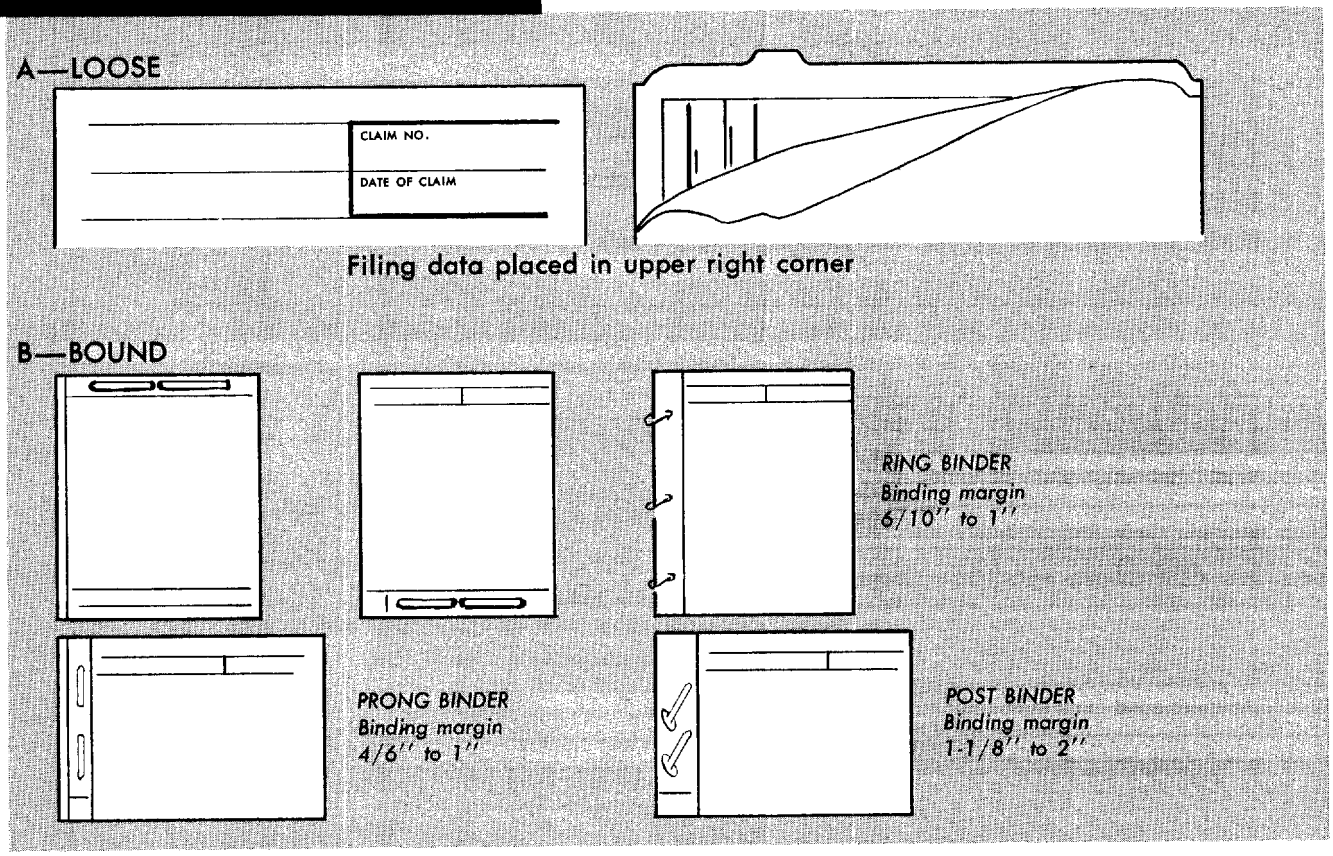
VISIBLE INDEX CARDS

Although there are many types of visible files, the one most widely used is the "card pocket." The cards are held in pockets which have a transparent edge along the bottom. This visible margin ranges from $\frac{3}{16}$-inch to ½-inch. The form must be designed so that the filing data show in the visible margin. This is illustrated in figure 33d.

A ¾-inch stub is required on a typed visible file card to hold it securely in place in the machine while the last line is being typed. The form is perforated at the stub. The vertical rules extend to the stub perforation. When the card

FILING DATA

LOOSE AND BOUND FILING



VERTICAL AND VISIBLE FILING

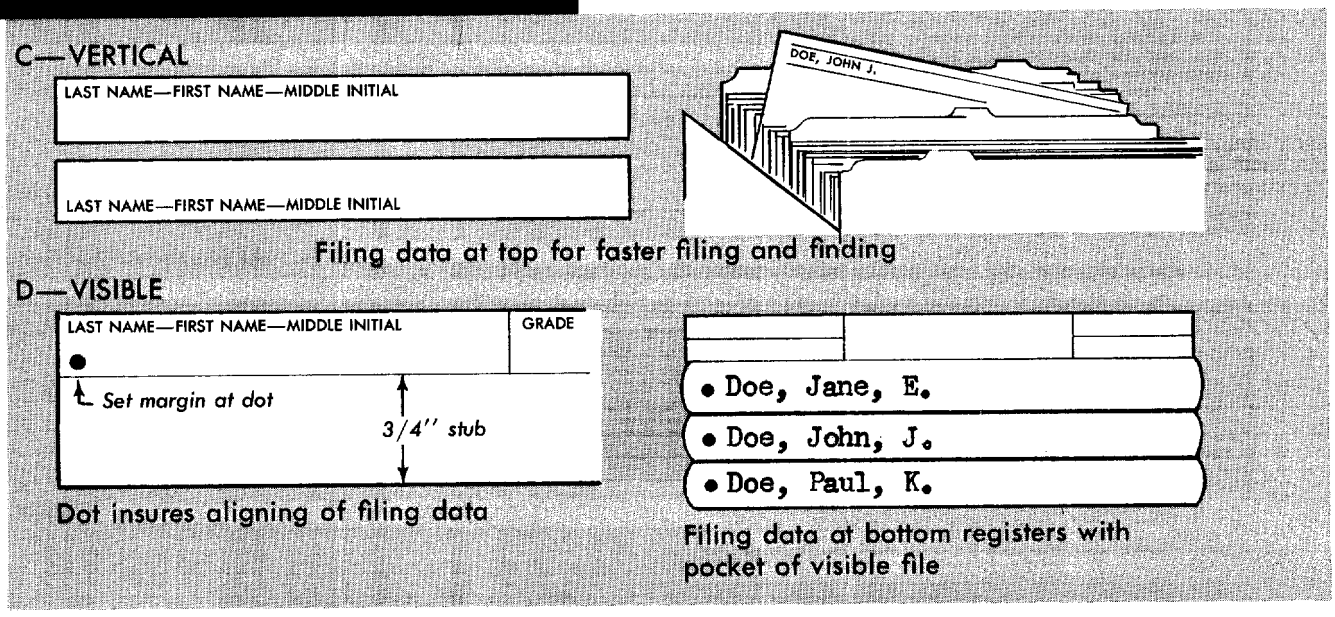


Figure 33

is filed, the stub may be removed, or turned under if information is later to be entered on the last line.

A dot or a tick mark in the margin guides the typist in entering file or reference information on the visible space. Also, an instruction to the typist may be printed on the stub at the bottom of the card.

Removable colored signals may be placed on the visible edge of the form to show key information, changing conditions, or followup dates. The printed captions used to guide the placing of signals also should appear in the visible area with the filing data.

As soon as visible index cards have served their purpose, they should be transferred to less expensive vertical file card equipment. The filing data at the bottom are repeated at the top in the same way as that prescribed for a vertical card.

Visible file equipment accommodates cards from 4 inches to 13 inches in width and almost any depth desired. Folded cards are also available. Manufacturers' catalogs should be consulted for specific sizes and other specifications.

FILING LARGE FORMS

Large forms can be folded for loose filing, to fit into prong folders, or into ring binders. This facilitates their handling, and standard size folders and binders can be used.

Loose Filing

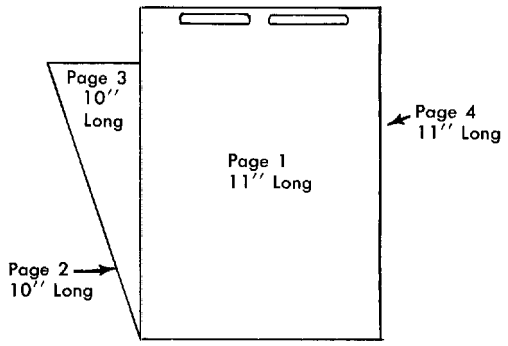
Standard size forms which are larger than 8 by 10½ inches can be folded into even segments for filing. For example, an even fold is used if a 16- by 10½-inch form is folded loose in a file folder. The form is folded in half on the 16-inch measurement, thus bringing the form to 8 by 10½ inches. It is advisable to place folding instructions in a $\frac{7}{10}$-inch gutter down the middle of the page, running from top to bottom. This eliminates the possibility of obliterating an entry when the form is folded for filing.

Prong Folders

An uneven fold is used if an 8- by 21-inch form is bound in a prong folder. Thus, one page measures 11 inches from the edge of the paper to the fold, and the other page measures 10 inches from the fold to the edge of the paper. This method of folding produces a binding margin of one inch which permits unfolding the form without removing it from the folder.

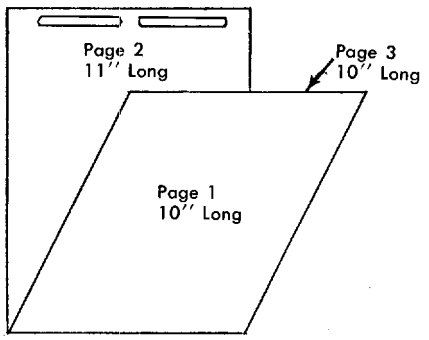
If the form consists of four printed pages, page one is 11 inches long and page two is 10 inches long. Page two is folded under for filing. If the form consists of three printed pages, page one is 10 inches long, page two is 11 inches long, and page three is 10 inches long. Page one folds up for filing. Figure 34 demonstrates this.

FOUR PAGE FORM



Page 2 folded under for filing

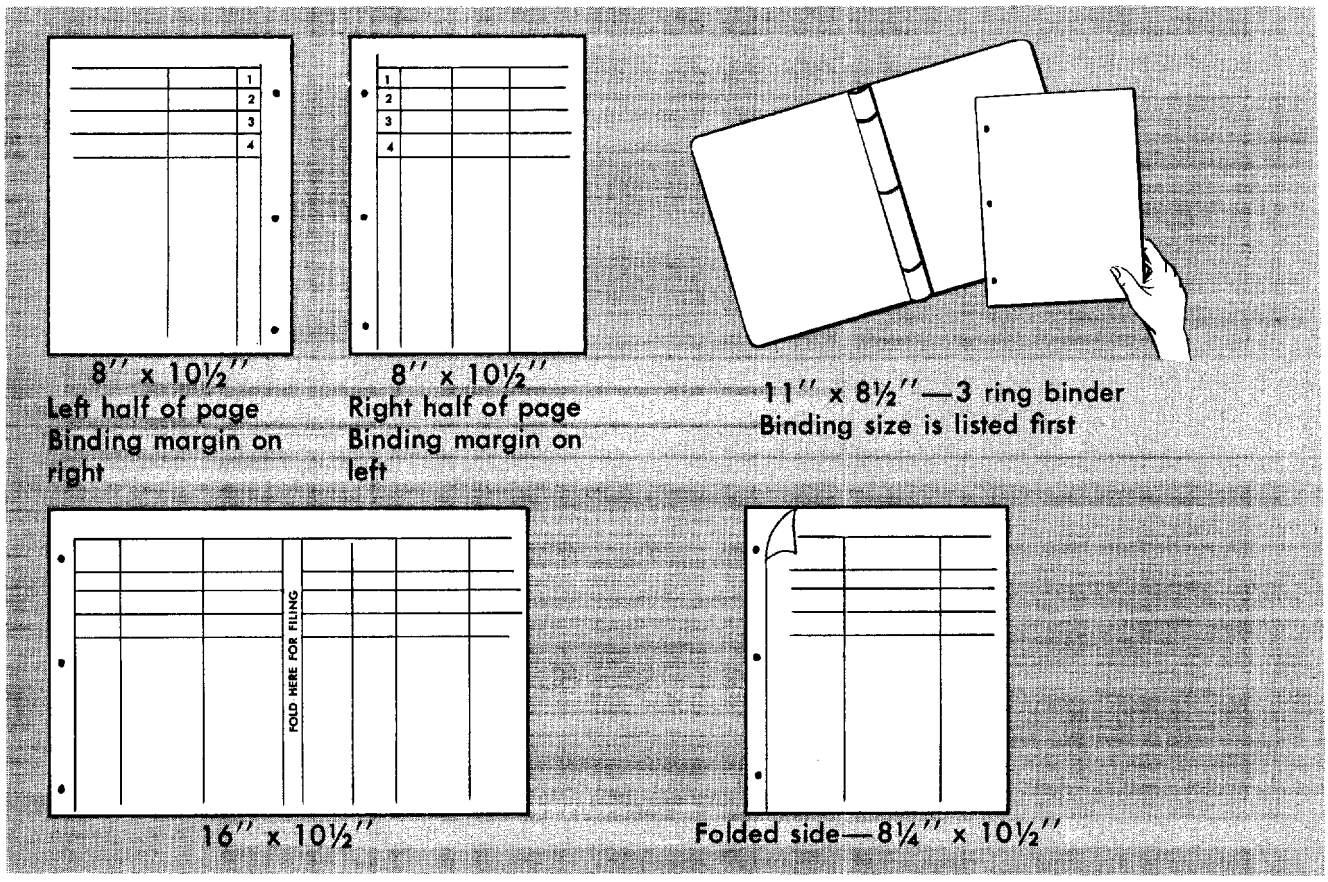
THREE PAGE FORM



Page 1 folds up for filing

Figure 34

WIDE FORMS FILED IN BINDERS



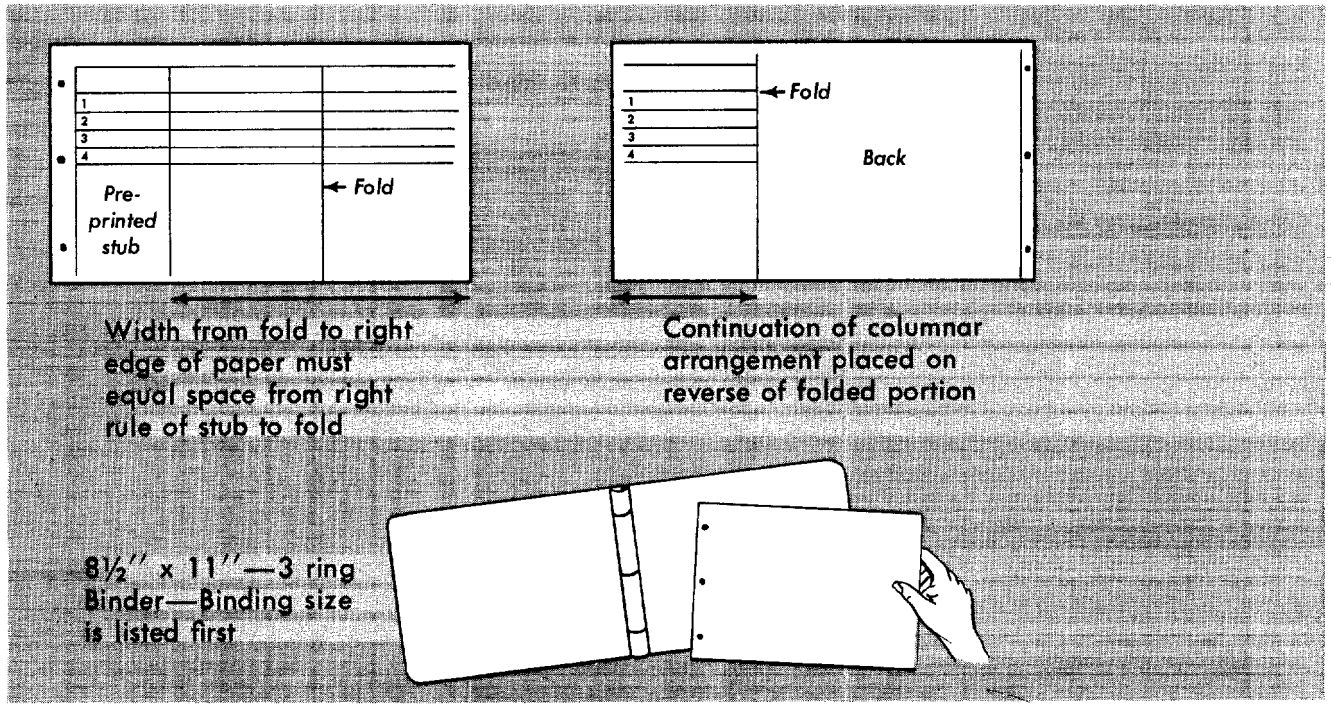


Figure 35

Ring Binders

The 11- by 8½-inch binder accommodates forms any size from 8½ by 10 inches to 16 by 10½ inches. For instance, a 16- by 10½-inch form may be printed in two parts, each one 8 by 10½ inches, so that it reads continuously across the binder when opened flat.

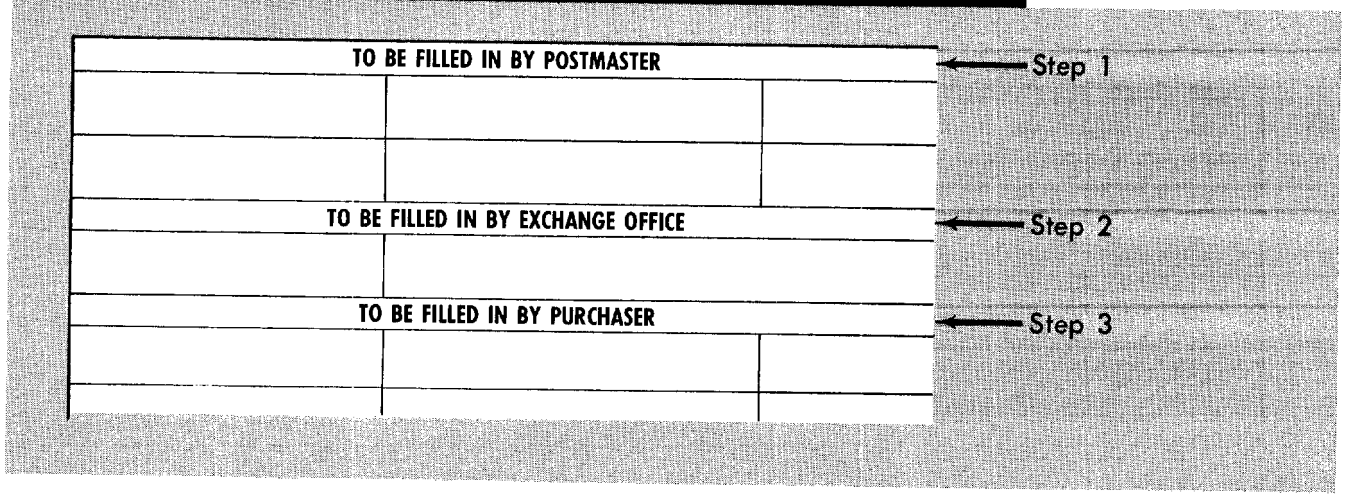
Each horizontal line is numbered on both sides for easy reference, as shown in figure 35. The left side has the binding margin on the right. The right side has the binding margin on the left. The form is printed head-to-head. Thus, as each page is turned, a full 16- by 10½-inch form is shown.

An alternative method is to print the 16- by 10½-inch form on one sheet of paper. Figure 35 shows how by allowing a binding margin of ¾-inch, then folding the page over to the binding margin, the page is 8¼ by 10½ inches.

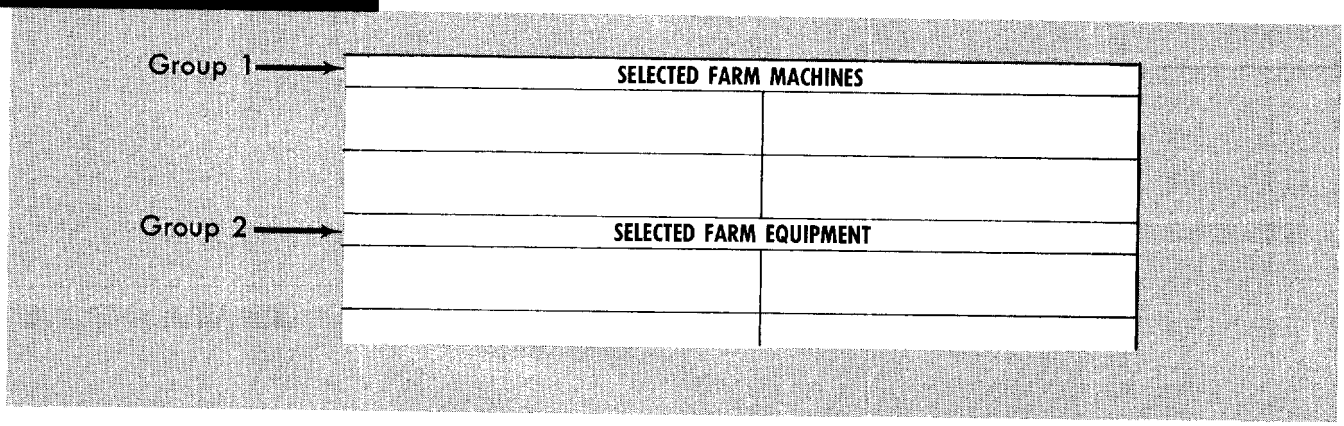
A form 14 by 8 inches, which requires greater width to accommodate the data needed may be folded into a binder, as illustrated in figure 35. In this case, the binding is on the 8-inch edge. The width of the folded portion is determined by the width of the stub on the form, and this will vary from one form to another. The width from the fold to the right edge of the paper must equal the space from the right rule of stub to the fold. The folded portion is printed on both sides, thus extending the width of the form by the amount of the folded portion

GROUPING DATA

CORRELATE ITEMS WITH SEQUENCE OF PROCESSING STEPS



GROUP ITEMS



IDENTIFY GROUPS FOR REFERENCE

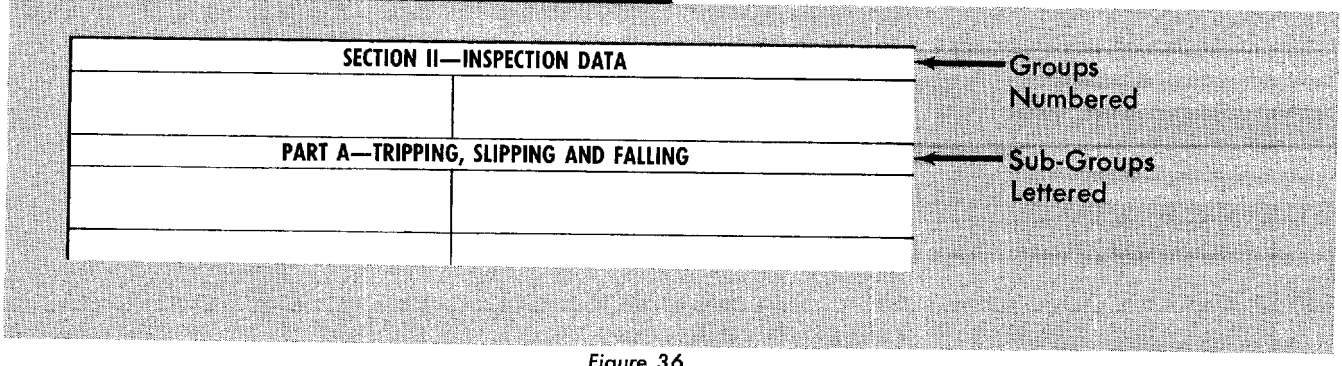


Figure 36

III. THE WORKING AREA

As indicated in the preceding chapter, part of the space on a form serves purely an internal facilitative role. The rest of the form is devoted to the substantive work the form must do, its reason for being. This part is usually called the "working area." It is this area on a form that pulls into an organization the information it seeks.

ARRANGEMENT

To make the filling in of a form easier, its arrangement should make for continuous execution. Any other arrangement invites mistakes and lowers the quality and quantity of output. To introduce continuous execution into the design three basic arrangement factors are involved:

- Grouping data
- Establishing item sequence
- Alining data

Grouping Data

If different persons are to enter data on the same form, the data to be filled in by each person are grouped according to the sequence of the processing steps involved. This obviates searching or backtracking by all concerned. Or, if a form is used as a source document to collect data on different types of material, the items are grouped by related items or kinds of material.

Sometimes it is helpful to identify the groupings. The main grouping may be numbered and if there are subgroupings, they may be lettered. These various ways of grouping are illustrated in figure 36.

VALUE OF SAME ITEM SEQUENCE

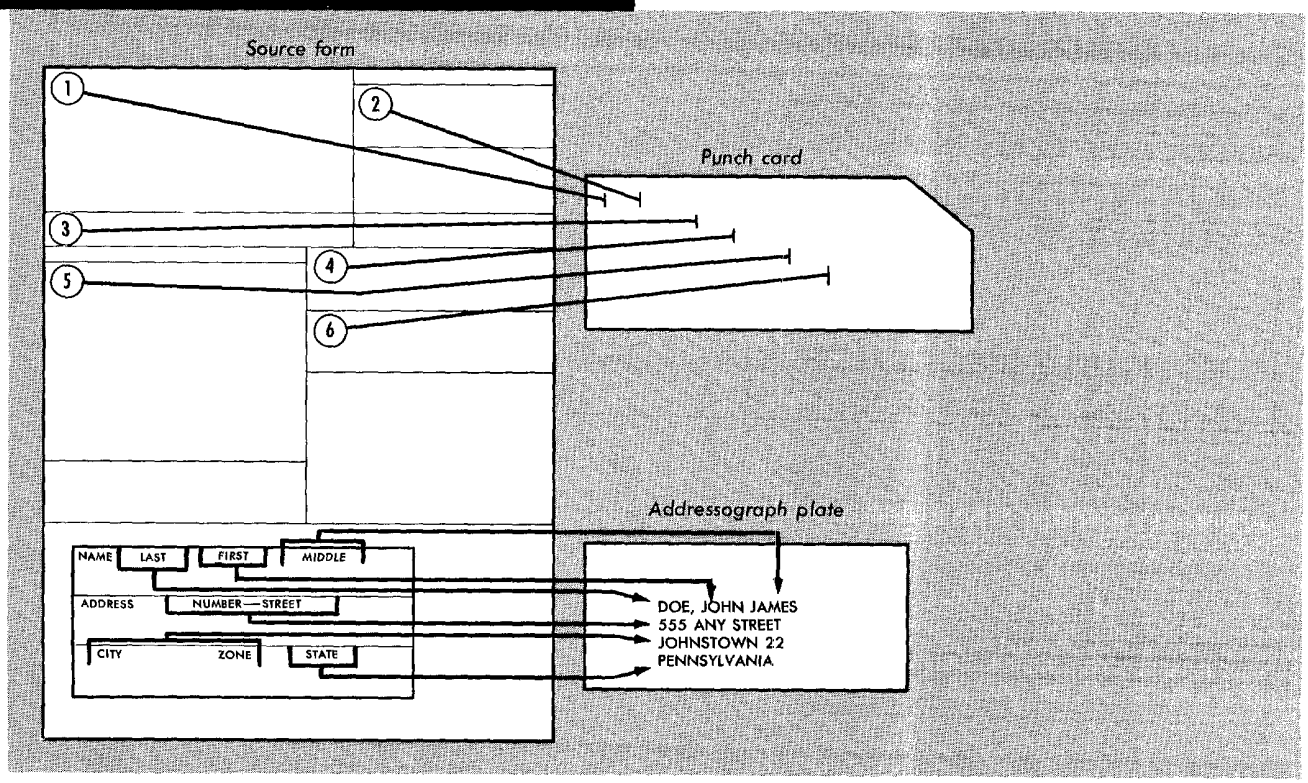


Figure 37

Establishing Sequence

After related items have been put together, they should be placed in a sequence which will eliminate any unnecessary writing motions and make it easy to transcribe information from the form if that is involved. Transcribing means the arrangement of comparable items on related forms must be examined. For example, if the information on a form is punched into a tabulating card, the sequence of items on the form and card should be coordinated so that the information will be in proper order for punching. Figure 37 illustrates this.

Numbering the items on a form makes reference easier and faster. If an item has several component parts, they may be identified by following the traditional number-letter outline system.

Alining Data

The data on a form are arranged so that the flow of writing is continuous from left to right and from top to bottom to correspond to people's visual habits. When this straight-line flow concept is observed, data are entered on the form without any waste motion. Items on a form can be alined vertically for a minimum of tabular and marginal stops.

SIZE

The sizes of the paper stock on which forms are printed have been standardized. A full sheet is cut into equal divisions which, when printed, provide finished forms in standard sizes. The sheet size most commonly used in the Federal Government is 32 by 42 inches. The standard form sizes which are cut from this sheet are sketched in figure 38.

STANDARD PAPER SIZES

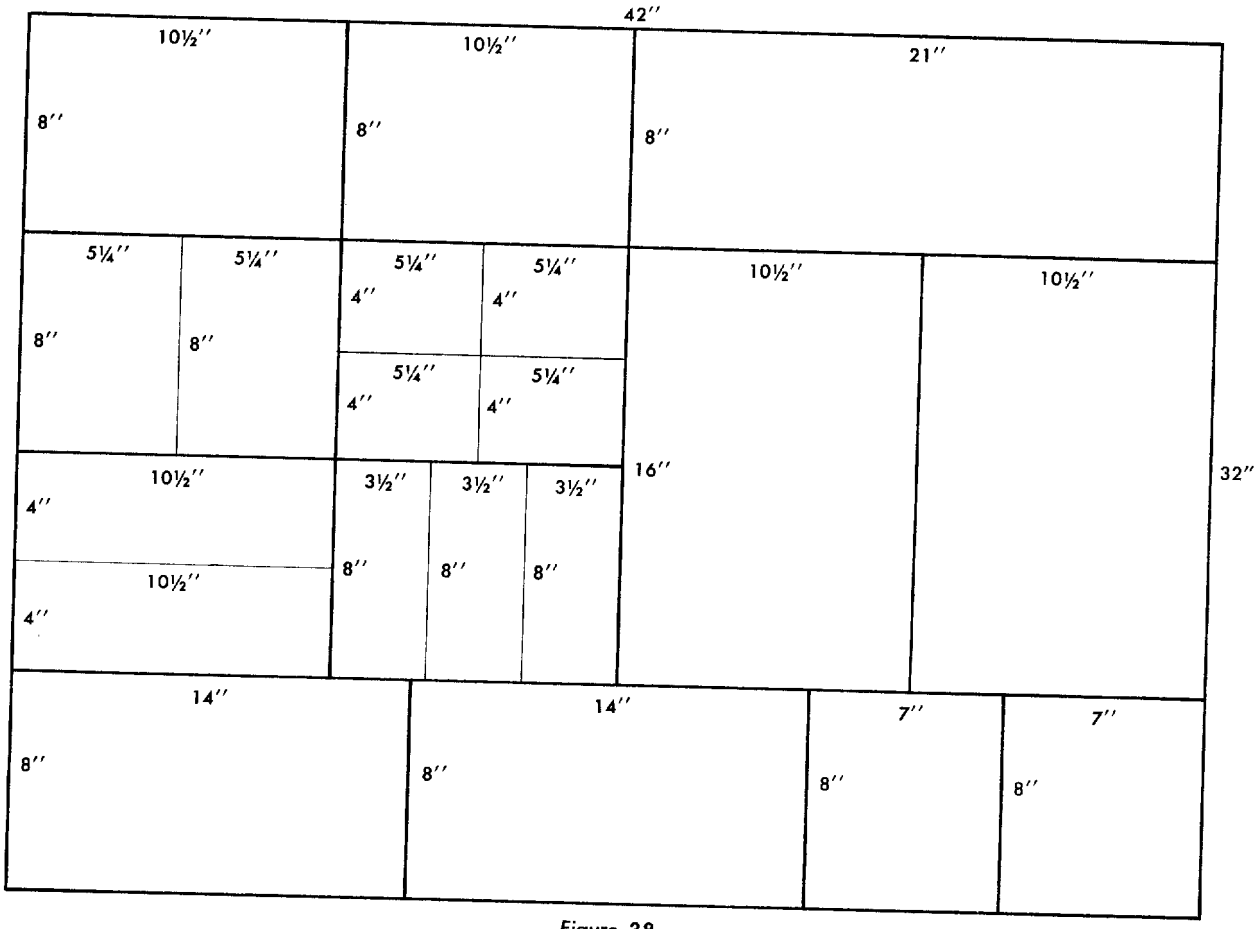


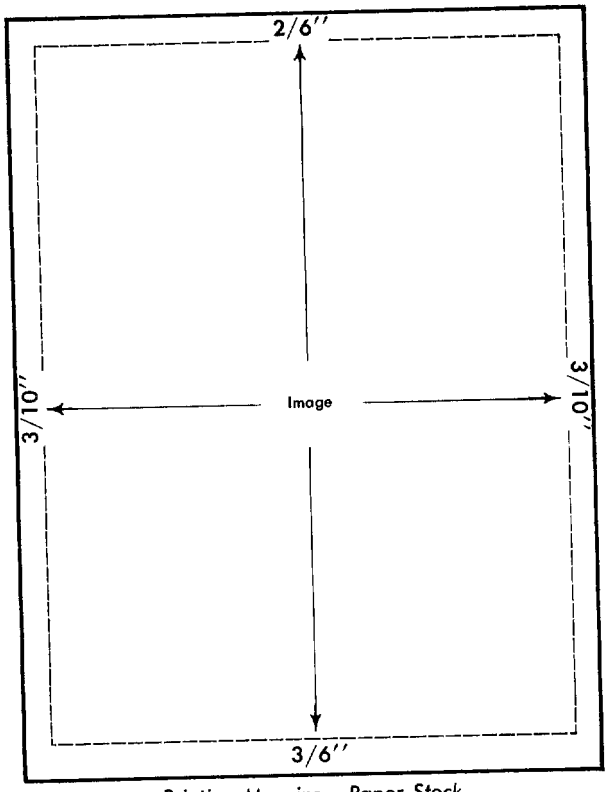
Figure 38

The argument for standard size does not rest on reduced paper costs alone. The greatest economies are in the areas of machines, equipment, and supplies, all of which have been standardized in size, too. Any time a non-standard size form forces use of other non-standard items, the costs rapidly mount. Non-standard size filing cabinets, for example, cost about 40 percent more than standard size filing cabinets.

A form may be designed with either the small dimension or the large dimension as the reading width. The width is always referred to first, then the length. "Letter size," thus, is 8 by 10½ inches. Only if the sheet were to be turned sideways and typed in that position would it be referred to as 10½ by 8 inches.

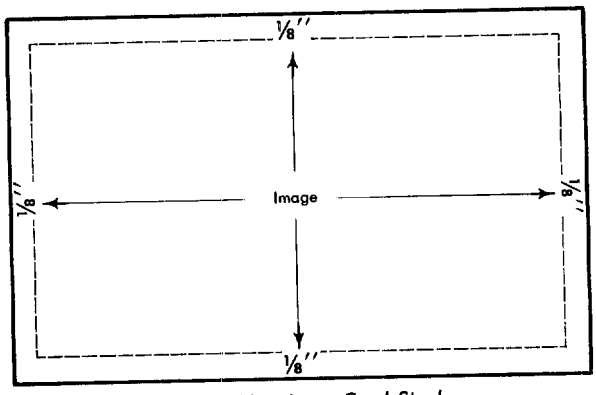
MARGINS

Reproduction facilities require margins as working space for mechanically "gripping" the paper during the printing process and for trimming the paper when several copies of a form are printed on large sheets. Allow a minimum margin of ⅝-inch at the top, ⅜-inch at the bottom, and 3/10-inch at the sides, as illustrated in figure 39. If card stock is used, allow at least ⅛-inch on all sides as shown in figure 40. If forms are to be bound for filing, see "Bound Filing" on page 27.



Printing Margins —Paper Stock

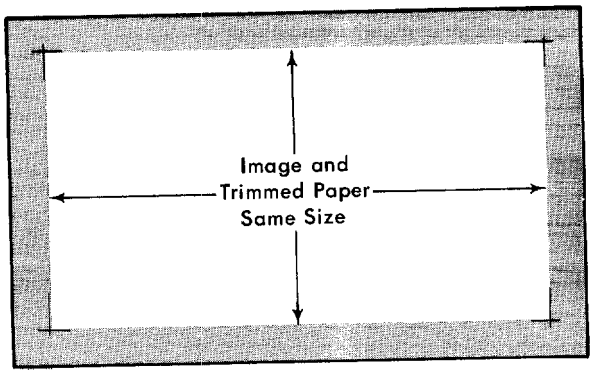
Figure 39



Printing Margins —Card Stock

Figure 40

On some types of forms the *image* must extend to the edge of the paper. For example, a card form with limited space, or a group of forms which are put together in an overlapping position to indicate comparative and cumulative figures. The extending of the image to the edge of the paper requires printing on a sheet of paper larger than the trimmed and finished form size—then trimming to the finished desired size.



Bleeding—Form Printed on Larger Size and Trimmed to Desired Size

Figure 41

This is called "bleeding" which means to run off the edge of the trimmed printed sheet, and is depicted in figure 41. If a form is designed for offset printing, lines should be drawn beyond the image size. When trimmed, the lines will bleed off the edge of the paper, leaving a clean edge. When possible, bleeding should be avoided as it can increase handling cost.

SPACING

Horizontal and vertical space requirements are determined by the amount of fill-in to be entered, and the printed matter such as box captions, column and section heads, and text. The writing method (hand, typewriter, or a special office machine) determines the amount of space to be allowed for fill-in data; while the number of characters per inch of the type face used determines the amount of space to be allowed for the printed matter.

Horizontal spacing is based on the *number of characters* written per inch, which is controlled by the writing method used to enter the data. *Vertical spacing* is based on the *number of writing lines* that can be written per inch. Figures 42 and 43 demonstrate these spacing characteristics.

WRITING METHOD	SPACE PER CHARACTER
Elite Typewriter	1/12"
Pica Typewriter	1/10"
Handwriting	1/10" to 1/6"
Space per character determines	Horizontal space between vertical rules

Figure 42

WRITING METHOD	SPACE PER LINE
Typewriter	1/6" or multiple
Handwriting	1/4"
Handwriting and typing	1/3"
Space per line determines	Vertical spacing between horizontal rules

Figure 43

Most forms are typewritten, some are handwritten, and a small percentage combine these methods.

TYPEWRITTEN

Horizontal Spacing. There are 12 characters of elite type to the inch and 10 characters of pica type, on standard typewriters. See figure 44. Accordingly, when counting horizontal spaces, allow 1/12-inch for elite or 1/10-inch for pica type. 1/10-inch accommodates either elite or pica type and allows maximum entry space. Wherever possible, add a minimum of one extra space to the required number of characters to prevent crowding.

Vertical Spacing. There are six vertical lines per inch on the standard typewriter, elite or pica. Accordingly, allow 1/6-inch or its multiple for each line of typing, as shown in figure 44. By measuring spacing in this way a form may be adjusted in the machine for the first line of typing with no further adjustments necessary.

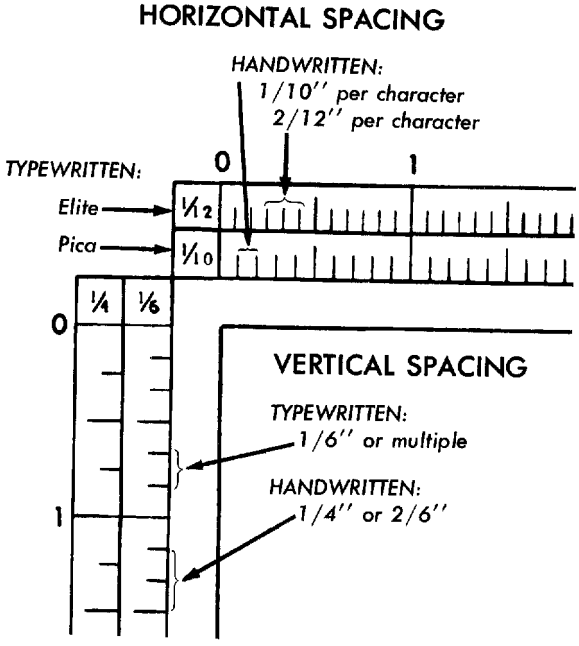


Figure 44

In designing a form on the 10½-inch width, you must consider the typewriter carriage width (writing line). Most of the standard typewriters today have a minimum carriage width of 11 inches with a 10-inch writing line.

There are many typewriters still in use, however, with a 10-inch carriage width and a 9-inch writing line. In such cases, the horizontal entry area across the form must be confined to 9 inches of space, as shown in figure 45. This permits a ¾-inch right and left margin. To conserve space, the left margin can be limited to the standard $\frac{3}{10}$-inch. Preprinted material can be placed in the area between the $\frac{3}{10}$-inch margin and the beginning of the 9-inch fill-in area.

HANDWRITTEN

Horizontal Spacing. Allow $\frac{1}{10}$ to $\frac{3}{12}$-inch per character according to conditions of use. The difference this makes in the size of boxes as against typewritten characters is illustrated in figure 42.

Vertical Spacing. Allow ¼-inch to ⅜-inch with ⅜-inch being needed for box design. Otherwise ¼-inch will suffice for handwritten entries. Figure 43 points up vertical spacing practices.

Optional

If a form is filled in either by hand or typewriter or a combination of both, the horizontal space is determined by hand fill-in requirements and the vertical space by typewriter requirements. The ⅜-inch vertical spacing will accommodate either typewritten or handwritten entries.

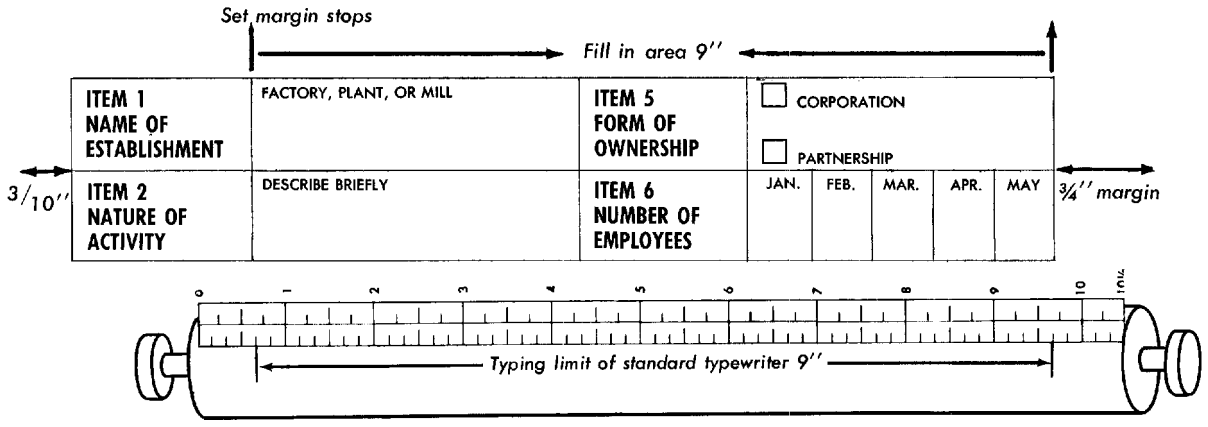
Box Design

Consider figure 46. The first illustration shows the way forms were usually designed prior to the 1920's. The second way became widespread in the 1930's. The third came into vogue in the 1940's and is gradually driving the other two methods out of use. The reasons for this are given with the figure. The short name for the third technique is "box design." It is as practical for handwritten entries as for typewritten. It is sometimes called "upper left corner (ULC) arrangement."

Horizontal rules extend from the left to the right margin. Boxes are made by the insertion of vertical rules which are alined wherever possible to keep the number of typewriter tabular stops to a minimum. The typing position of each line starts from a common left margin. Thus, the typewriter carriage is always returned to the same position.

Printed captions—items of information requested—are placed in the upper-left corner of the boxes. Therefore, the captions are always visible when the form is in a writing machine and the entire width of the boxes below the captions are available for the fill-in data. It is not uncommon for box design to increase available space by as much as 25% over the caption and line arrangement.

Each caption should be complete in itself but can be simplified, defined, or qualified by means of brief, italic, amplifying statements in parentheses. A blank space reserved for future use by someone other than the person filling in the form should be so marked. A box head such as "Do not write in this space" or "Leave blank" may be used. If the space is to be reserved for a rubber stamp (cashier's, time



Standard typewriter will take 10½'' form but typing must be limited to 9''

Figure 45

CAPTIONS ON THE LINE

REQUEST FOR PERSONNEL DATA

Name ---------- Grade ----------

Address ---------- City ---------- State ----------

Telephone Number ---------- Age ----------

Height ---------- Weight ---------- Sex ----------

NOT RECOMMENDED:

- Robs space
- Wastes motions
- Defeats use of tab stops
- Impedes reading, writing, and interpretation
- Gives a ragged appearance

CAPTIONS UNDER THE LINE

REQUEST FOR PERSONNEL DATA

(NAME) (GRADE)

(ADDRESS) (CITY) (STATE)

(SERIAL NO.) (AGE) (SEX)

NOT RECOMMENDED:

- Same as above

PLUS

- Hides captions from typist

BOX DESIGN

RECOMMENDED:

- Saves space
- Avoids waste motions
- Alines tab stops
- Aids reading, writing, and interpretation
- Streamlines appearance

REQUEST FOR PERSONNEL DATA

NAME			SERIAL NO.
ADDRESS *(City and State)*			TELEPHONE NO.
AGE	SEX	WEIGHT	HEIGHT

Figure 46

and date, and the like), the number of characters to go in the space should be computed in the same way as they are for a written entry.

Because each space is clearly defined and each box is limited to one entry, there is never any doubt as to which box a caption applies. Also, the typist does not have to space through printed captions to reach the fill-in area; or to roll the typewriter platen up to see the caption and then back to type the entry.

Box design brings about a pleasing appearance. This is because the alining of vertical rules and a common left margin eliminate the cluttered appearance common to unplanned forms.

The advantages of box design are illustrated in figure 47.

Columnar or Tabular

Columnar or tabular arrangement is used instead of the box design arrangement when several entries of the same type are to be listed under one heading. This eliminates the repetition of descriptive items for each type of information, thus saving space.

In planning a columnar or tabular arrangement, the following considerations should be made:

To Space Heads. The amount of fill-in data and the writing method determines the column width. The longest head determines the depth. One fill-in space should be allowed on each side of the entry to be made if space permits. Figure 48a displays head spacing.

To Determine Depth of Arrangement. When the same information is wanted on known items, a preprinted stub is used with column heads. The length of the preprinted stub determines the column length. If there is no preprinted stub, the estimated number of lines to be filled in determines the column length. See figure 48b. Sometimes the number of lines needed to accommodate the fill-in data exceeds the number that can be provided on one sheet. If so, continuation sheets may be used which should carry complete identifying information.

To Make Reference and Arithmetic Easier. To aid the user, columns and lines should be identified. Columns are best identified by letters because there are seldom more than 26 columns—the number of letters in the alphabet. All vertical preprinted items (stub) or lines can be numbered. For example, accompanying instructions which have been keyed to the lines and columns might read Section I, Line 5, Column (b). Column symbols may be repeated at the bottom of a large form.

BOX DESIGN

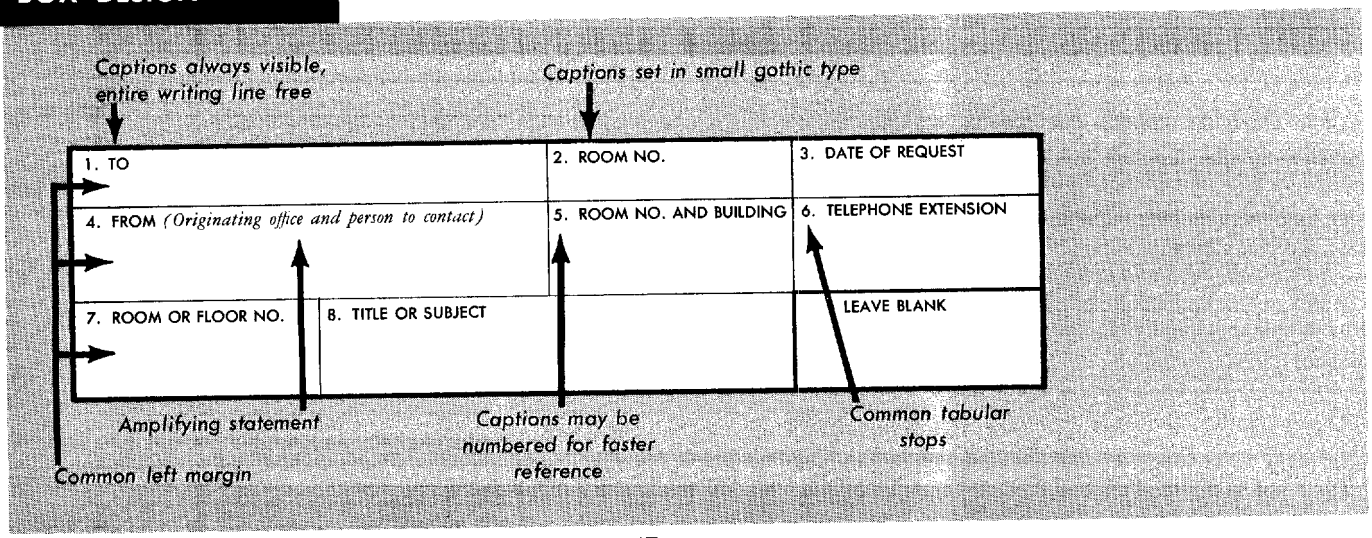


Figure 47

COLUMNAR (TABULAR) ARRANGEMENT

A—TO SPACE HEADS

Longest head determines depth

Written entry determines width of column

Allow one fill-in space on each side of entry if space permits

PRIMARY			
X X X X X X X X X X X X X X X X X X X X		SECONDARY	
X X X X X X X X X X X X	X X X	TERTIARY	
o o o o o o	o o	o o o o o o	o o

B—TO DETERMINE DEPTH OF ARRANGEMENT

Preprinted stub determines depth of columns

If stub is not preprinted, estimated number of lines determines depth of columns

1. X X X X X X X X X X		
2.		
3.		
18.		
19.		
20.		

C—TO MAKE REFERENCE AND ARITHMETIC EASIER

Letter columns

Number lines or items

LINE NO.	(a)	(b)
1.		
2.		
3.		
4.		

D—TO PRINT

Center column heads from top to bottom and side to side

Type size decreases with break-down of heading

Amplifying statements printed in lower case italics enclosed in parentheses

Writing line printed for hand-writing—optional for typewriting

FROM STOCK ISSUE AND HISTORICAL RECORD CARDS			
		AMOUNT	
QUANTITY ON HAND (f)	TOTAL VALUE *(Omit cents)* (g)	OVER INVENTORY *(g) minus (e)* (h)	UNDER INVENTORY *(e) minus (g)* (i)

Figure 48

In making arithmetical computations, as in report forms, instructions might read: Over-inventory: Column (g) minus Column (e) equals Column (h). See figure 48c.

When columns are composed of figures which are to be tabulated, the placing of the line number at the right makes it easier for the key punch operator to associate the item number with the figure to be punched. See figure 49.

SHIPMENTS, JANUARY–DECEMBER	34	
BOOK ADJUSTMENTS *(Explain under "Remarks")*	35	
TOTAL STOCKS, AT PLANT—DEC. 31, 1950 *(Regardless of Ownership)*	36	
STOCKS, AT PLANT—DEC. 31, 1950 *(Owned by Others)*	37	
STOCKS, STORED BY OTHERS—DEC. 31, 1950 *(Owned by You)*	38	
STOCKS, IN TRANSIT TO PLANT—DEC. 31, 1950	39	

Please fill in completeness

Figure 49

To Print. Primary or main heads are centered across the tops of the sections which they describe. Information to be collected under primary heads can be subdivided into secondary heads, and further subdivided into tertiary heads. The type sizes selected should *decrease* with the breakdown of headings. Column heads may be placed on two or more lines or abbreviated if the column width does not accommodate the printed caption on one line, and provided they are fully intelligible.

Explanations of column heads such as "specify kind" or "omit cents" can be placed under the column heads in italics in parentheses. If the form is handwritten, writing lines should be printed to assist the user. If the form is typewritten, the use of writing lines is optional. See figure 48.

Vertical or angle column heads. If horizontal space will not accommodate column heads but sufficient vertical space is available, consider printing the column heads vertically or at an angle. Figure 51 portrays this.

Horizontal side heads. When more space is needed for horizontal writing lines, consider the use of side heads, as illustrated in figure 51. Side heads are easy to read; are readily associated with the items which they identify or describe; and assist in maintaining double typewriter spacing throughout the columnar area.

Vertical side heads. If the use of side heads does not allow sufficient horizontal writing space, consider the use of vertical side heads which also may be subdivided into secondary heads. However, they are not as easily read as the horizontal side heads. Figure 51 also illustrates the use of vertical side heads.

Switching column and stub heads. Sometimes there are several column heads across the form with only a few stub items. If horizontal space is limited and vertical space is plentiful, the column and stub heads may be switched, the column heads becoming the stub. In this way horizontal space is conserved as shown in figure 52.

Minor column heads switched to stub heads. When there is no stub head and there is a need to save horizontal space, sometimes minor column heads can be made into a stub head. This also is illustrated in figure 53.

Answer (fill-in data) abbreviations. Sometimes it is impossible to provide sufficient columnar space to accommodate the fill-in data. If the answers can be predetermined, a numerical or alphabetical abbreviation can be used instead. These abbreviations and their meanings, as in figure 50, are printed at the top or bottom of the columnar area to which they refer and as close as possible to the column involved.

KEY TO ACTION CODE—
S–SUBSTITUTE ITEM **B**–BACK ORDERED
1–CANCELED—STOCK EXHAUSTED **2**–CANCELED—NOT STOCKED

AMOUNT	ACTION CODE	RECEIVED	
		QUANTITY	AMOUNT

Figure 50

SPACE SAVERS

PROBLEMS

TAX CODE	STATE TAX CODE
4	5

4/10'' needed to set type

2/10'' needed to make entry

Horizontal space needed for column heads not available

FIRST YEAR	*Writing Line Lost*
1ST QUARTER	
2D QUARTER	

Writing line lost, doubt created if entry is needed

FIRST YEAR	
1ST QUARTER	
2D QUARTER	

Writing line lost, over-use of shading creates cluttered look

FIRST YEAR 1ST QUARTER	*Triple space*
2D QUARTER	*Double space*

Writing line lost, creates variance in typewriter spacing

SOLUTIONS

TAX CODE	STATE TAX CODE
4	5

TAX CODE STATE TAX CODE

4 5

Use vertical column head or angle column head to set type and make entries 2/10'' horizontally

FIRST YEAR	1ST QTR.	
	2D QTR.	

Use horizontal side heads to save writing line

FIRST YEAR	1ST QTR.	
	2D QTR.	

Use vertical side head to save horizontal space

Figure 51

ITEM	REVENUE *(in whole dollars)*							
	STAMPS, ENVELOPES, POSTAL CARDS	METERED POSTAGE	SECOND CLASS POSTAGE	PERMIT MAIL	MONEY ORDER REVIEW	BOX RENTS	ALL OTHER	TOTAL REVENUE
THIS PERIOD ACTUAL								
TARGET								
YEAR-TO-DATE ACTUAL								
TARGET								

REVENUE *(in whole dollars)*	THIS PERIOD		YEAR-TO-DATE	
	ACTUAL	TARGET	ACTUAL	TARGET
Stamps, Envelopes, Postal Cards				
Metered Postage				
Second Class Postage				
Permit Mail				
Money Order Revenue				
Box Rents				
All Other				
Total				

Figure 52

Major head →
Minor head →

NUMBER OF FORMS REVIEWED			NUMBER OF FORMS REPRINTED			NUMBER OF NEW FORMS		
JUNE	JULY	AUG.	JUNE	JULY	AUG.	JUNE	JULY	AUG.

MONTH OF	NUMBER OF FORMS		
	REVIEWED	REPRINTED	NEW
JUNE			
JULY			
AUG.			

Figure 53

TOTALS

When all columns across the form are to be totaled, place the word "Total" with the stub. If a total figure is at the far right, place the word "Total" close to the column in which the figures are entered. If certain columns are not to be totaled, the entry space for total should be blocked out by shading or **XXX**'s. It is helpful to designate totals by a ½- or ¾-point line. The above techniques are portrayed in figure 54.

18	NOVEMBER		
19	DECEMBER		
20	**TOTAL**		

All columns totaled

		TOTAL	

Column totaled at far right

TOTAL			

Certain columns not to be totaled

Figure 54

Forms having figures that must be carried to the reverse or to a second sheet should have space provided for inserting these at the top of continuing sheets, as demonstrated in figure 55.

SHADING

Shading enhances the readability of a form when it is used, as in figure 56, to:

- Block out entry spaces which are not to be used. (Sometimes **X**'s are used.)
- Emphasize entry spaces or sections to be filled in. Shading is a way of highlighting a specific item to call attention of the person filling in the form.
- Emphasize entries or sections to be processed. For example, a certain area of filled-in data is surrounded by a screen to indicate that the information is to be punched into a tabulating card. This aids the key punch operator as the information to be punched is isolated from other data.
- Reserve certain spaces for later entries. The spaces are not used by the person filling in the form, but are reserved for later use in processing, as in coding. In such cases, a suppressive screen is used. The fill-in data in the screened area are suppressed but legible. This technique is effective to distinguish easily one column of figures from another.
- Emphasize column entries to be processed. For example, columns with preprinted figures are shaded so the entry columns stand out and are easily read by the person processing the form.

1.

DATE	DOCUMENT NUMBER	QUANTITY RECEIVED	QUANTITY ISSUED	BALANCE
Balance Brought Forward →				

2.

	Balance to Reverse →			

3.

	Balance to Next Card →			

Figure 55

HOW TO USE SHADING

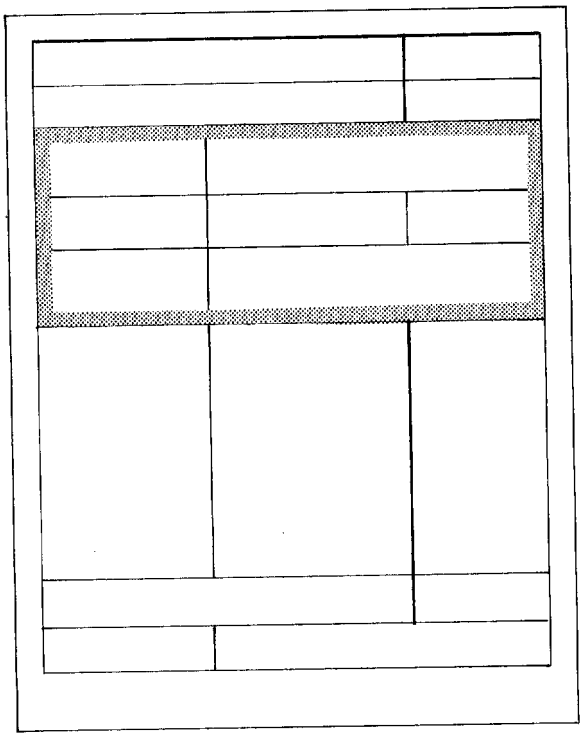
Spaces not to be used

TOTAL		

Emphasize entry spaces of sections to be filled in

ENTER BELOW YOUR TOTAL SALES FOR JULY 1959	

Emphasize entries or section to be processed



Reserve certain spaces for later entries

QUANTITY	MAN-HOURS	QUANTITY	MAN-HOURS

Emphasize column entries to be processed

1920		1950	
1921		1951	
1922		1952	
1923		1953	
1924		1954	
1925		1955	

Figure 56

Some columnar forms, such as balance sheets, have large areas of white space left in the columns where no entries are made. When this occurs, it is better NOT to use screening or xxx's to block out the unused space. Large areas of screening or xxx's tend to give the form a confused look. If screening is used, the pattern selected should be one which will reproduce a light gray. See figure 57.

FOOTNOTES

Footnotes should be avoided wherever possible. This is because the person filling in the form must look in two or more places to learn what information is to be entered.

Footnotes may be used to cite such data as quotations from official directives and laws, and to clarify items without over-crowding the entry space. Careful wording of items or brief explanations immediately after the items usually suffice.

If several footnotes are absolutely necessary, they should be numbered, confined to short explanatory statements, and placed at the bottom of the sheet on which the items are located as shown in figure 58. An asterisk (*) may be used to designate a single footnote. Footnote symbols follow the items, but precede the footnotes.

ANSWER BOXES FOR X-ENTRIES

Answer boxes (X-entry boxes, ballot boxes, and check boxes are other names frequently used) can be used when:

- A limited number of definite, preselected, optional answers such as "Poor," "Good," "Excellent," can be preprinted on a form. The person filling in the form indicates the chosen answer with an "X" in the proper box.
- A question can be answered "yes" or "no."

Answer boxes should always be marked "X" instead of checked ✓ because:

- There is no ✓ on the typewriter
- If handwritten, the ✓ may extend

OVER USE OF SHADING

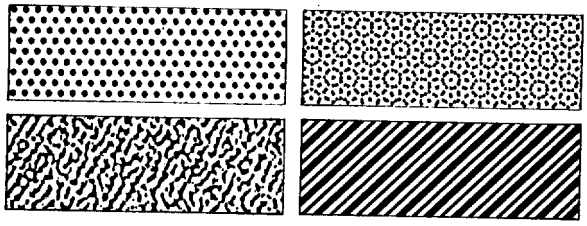
Too much shading is confusing to the user

	1,234	
	10,501	
	1,000	
	2,050	14,785
	1,001	
	18,095	
	50,010	
	7,000	
	52	76,158
	840	
	820	
	1,000	
	10,050	
	450	13,260

Open column is easier to read

	1,234	
	10,501	
	1,000	
	2,050	14,785
	1,001	
	18,095	
	50,010	
	7,000	
	52	76,158
	840	
	920	
	1,000	
	10,050	
	450	13,260

Do not use shading which is hard on the eyes or becomes too black when printed



Use a light, plain pattern

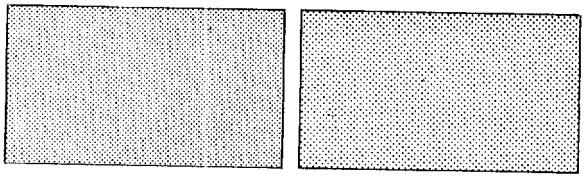


Figure 57

USE OF FOOTNOTES

BOX DESIGN

Two places to look before writing answer

1. LENGTH OF COURSE APPROVED [1]	2. NUMBER OF HOURS IN STANDARD WORK WEEK [2]

[1] Enter figure in months.
[2] If apprenticeship, give number of hours per week contracted by labor and management.

1. LENGTH OF COURSE APPROVED *(In months)*	2. NUMBER OF HOURS IN STANDARD WORK WEEK *(If apprenticeship, give number of hours per week contracted by labor and management)*

One place to look before writing answer

COLUMNAR ARRANGEMENT

Two places to look before writing answer

FOREIGN CURRENCY		INITIALS
AMOUNT [1]	EXCHANGE	

[1] Indicate amount in U.S. dollars and exclude surcharge.

FOREIGN CURRENCY		INITIALS
AMOUNT *(In U.S. dollars. Exclude surcharge)*	EXCHANGE	

One place to look before writing answer

Figure 58

beyond the box and create a chance of error in reading

- Although handwritten X's may be large, the cross point of the X falls into the box and prevents doubt as to meaning, as shown below:

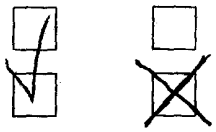


Figure 59

A ⅛-inch box will accommodate most X-entries without hand positioning the form in the typewriter. The X-boxes should precede the captions. A minimum amount of space between the answer box and the caption should be allowed so that they are clearly associated with each other. Sufficient space should be allowed between an answer box caption and the next box so there will be no doubt as to which caption the box applies.

Aline the entry spaces on the form to reduce tabular stops. Answer box captions may be numbered if the information is to be tabulated.

A horizontal arrangement of answer boxes is preferred to a vertical arrangement. In a vertical arrangement, hand-assembled carbon-interleaved sets may slip when placed in a typewriter. Therefore, an X-entry in one box on the original may appear in an adjacent box or between boxes on the copies. This may completely change the meaning of the filled-in information or cause it to be misinterpreted.

If a vertical arrangement is used and the form is filled in by typewriter, allow ⅜-inch spacing between boxes to minimize misinterpretation as stated above. If a form is filled in by hand, allow a minimum of ¼-inch spacing between boxes.

Figure 61 shows how to place X-boxes for optional answers. Figure 62 shows how to place X-boxes for "yes" or "no" answers. If space is limited, follow figure 60 in making the answer box captions an amplifying statement for a box head (upper-left caption). This assumes that the amplifying statement and the answer to be written are not lengthy.

SIGNATURE

A signature should not be required unless there is need for verification. The title of the signer and the date signed, if needed, should be grouped with the signature. This grouping is immediately preceded by necessary certifications, oaths, penalty clauses, and so forth.

Placement

When required, a signature should be placed at the bottom of the page, part or section of the form to which it pertains. Space is usually provided in the lower-right corner. This avoids waste of time by the signer in-searching for the place to sign and by the reviewer in processing the form. It is good practice to place signatures in the same sequence as the processing steps or workflow.

Two or more signatures may be arranged side by side or one below the other. Three inches horizontally and ⅜-inch vertically allow maximum signature space, as shown in figure 63

Captions

If a form or part of a form is not to be signed by a specific individual, the caption "Signature" will suffice. If the signature of a specific

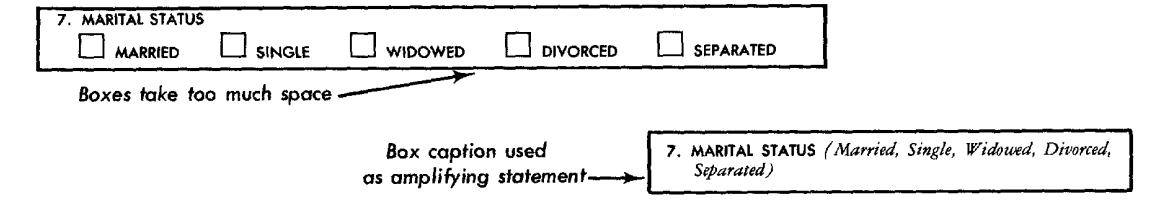


Figure 60

OPTIONAL ANSWERS

HORIZONTAL ARRANGEMENT

PREFERRED FOR OPTIONAL ANSWERS

A. HOW DO YOU FEEL ABOUT THIS RECOMMENDATION?

1. ☐ STRONGLY AGREE 2. ☐ AGREE 3. ☐ DISAGREE 4. ☐ STRONGLY DISAGREE 5. ☐ UNDECIDED

Modified arrangement

PRINT				
FACE ONLY	HEAD TO HEAD	HEAD TO FOOT	LOOSE LEAF	OTHER (Specify)

PRINT				
FACE ONLY	HEAD TO HEAD	HEAD TO FOOT	LOOSE LEAF	OTHER (Specify)

	DISTRICT	REGION
	X	X
	[X] NO TRUE BILL	[X] CHANGE OF PLEA

If possible align "X" entry with typing position of box head entry

VERTICAL ARRANGEMENT

Place box to left of caption
Vertical spacing between boxes:
2/6"—Typewritten
1/4"—Handwritten

"X" column placed to left of optional answers

1. ACTION COVERED BY THIS REPORT

☐ ARREST ☐ TRIAL
☐ INDICTMENT ☐ MOTION
☐ PLEA ☐ APPEAL

"X"	ROUTING
	EDITORIAL
	DISTRIBUTION CONTROL
	PRINTNG
	GRAPHICS
	FISCAL

Figure 61

"YES"—"NO" ANSWERS

SHORT QUESTIONS

ARE YOU LICENSED? ☐ YES ☐ NO

ARE YOU LICENSED? | YES | NO |

ARE YOU LICENSED? ☐ YES ☐ NO

ARE YOU LICENSED? | YES | NO |

ARE YOU LICENSED? YES ☐ NO ☐

LONG QUESTIONS

1. Does this company operate more than one place of business under the same employer identification number? ☐ YES ☐ NO	2. Does this company own or control another company? ☐ YES ☐ NO	3. Is this company owned or controlled by another company? ☐ YES ☐ NO

Indicate Answer by Placing "X" in Proper Column	Yes	No
22. (*a*) Are you a citizen of the United States of America, or (*b*) as a native of American Samoa do you owe allegiance to the United States of America?		
23. Are you now, or have you ever been, a member of the Communist Party, U.S.A., or any Communist organization?		
24. Are you now, or have you ever been, a member of a Fascist organization?		

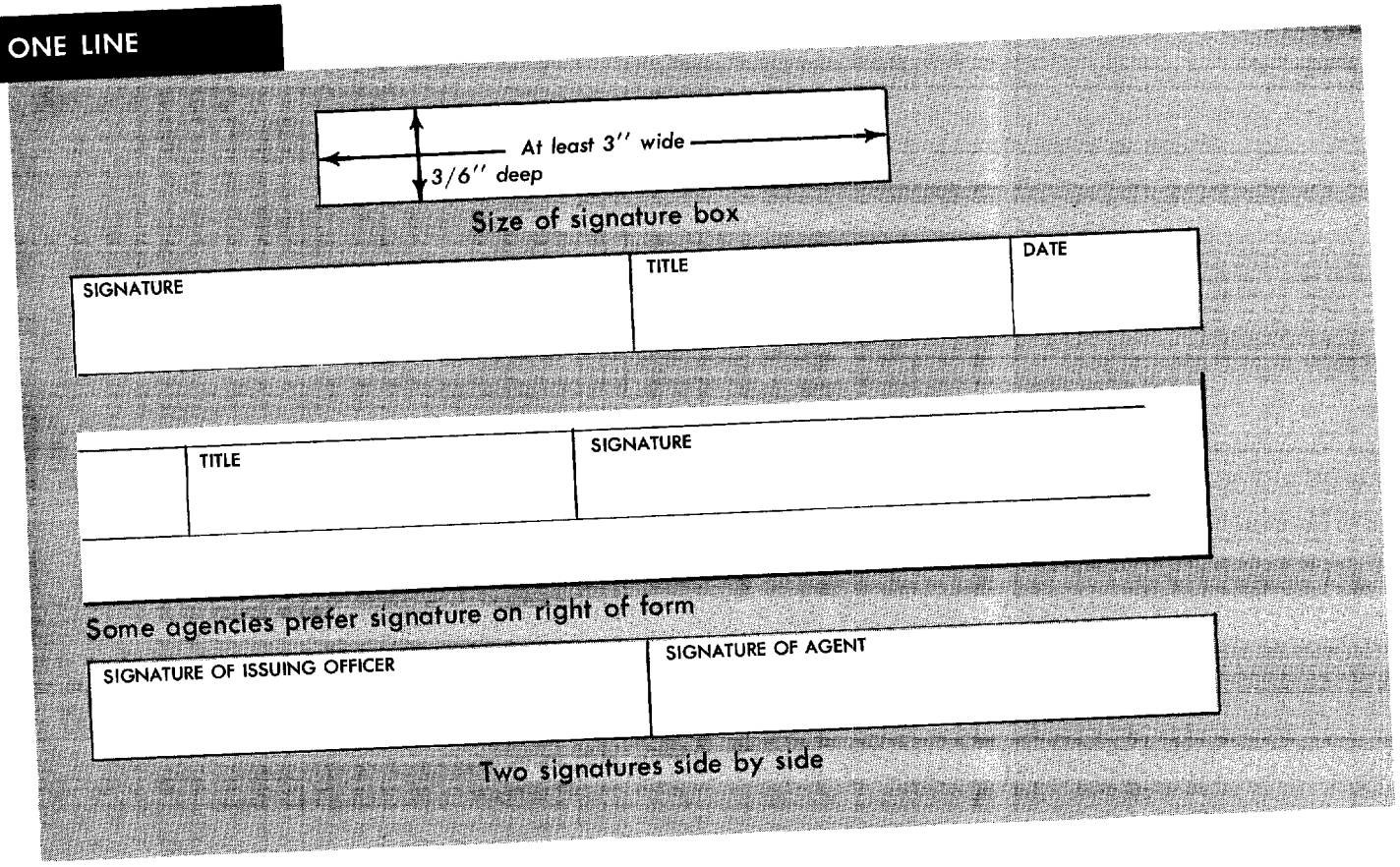
	YES	NO
1. Does this company operate more than one place of business under the same Employer Identification Number (Item 10 of Employer's Quarterly Tax Report, Treasury Form 941)?	☐	☐
2. Does this company own or control another company?	☐	☐
3. Is this company owned or controlled by another company? If "Yes," is checked in Part (c), give name and address of owning or controlling company.	☐	☐

1. Does this company operate more than one place of business under the same Employer Identification Number (Item 10 of Employer's Quarterly Tax Report, Treasury Form 941)?	☐ YES	☐ NO
2. Does this company own or control another company?	☐ YES	☐ NO
3. Is this company owned or controlled by another company?	☐ YES	☐ NO

Figure 62

PLACEMENT OF SIGNATURE CAPTIONS

ONE LINE



GROUPED SIGNATURES

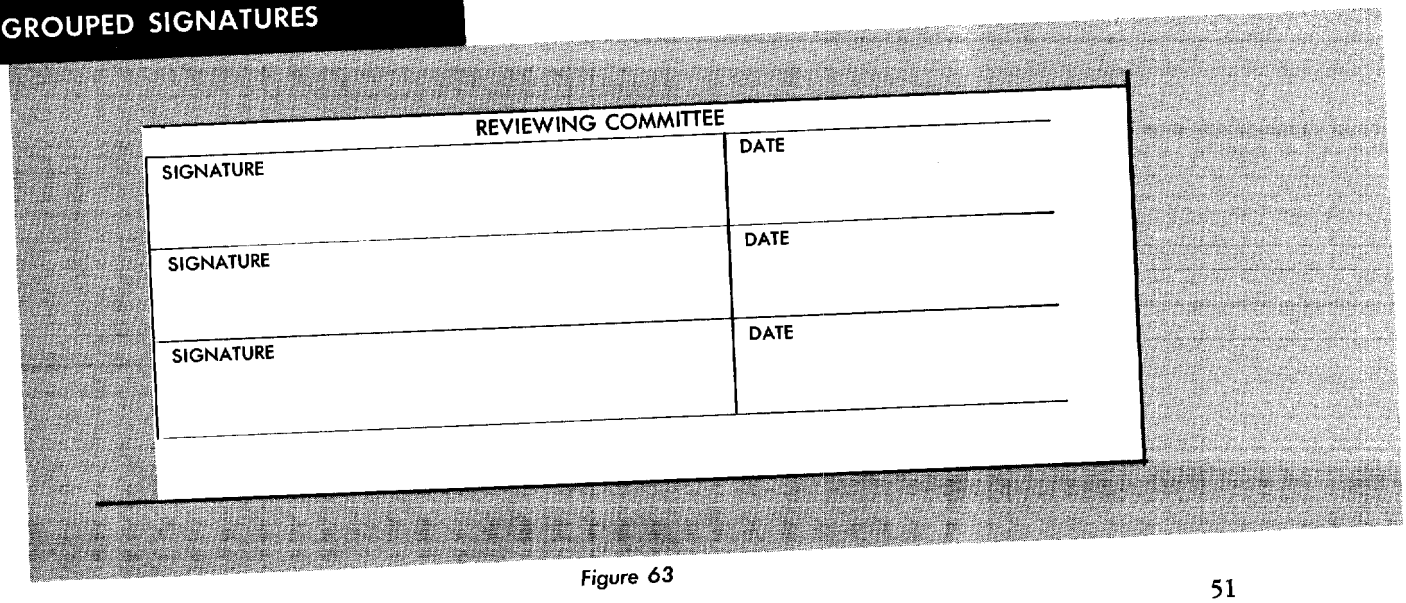


Figure 63

individual is required, the caption should designate who is to sign. To assist in deciphering the signature and to avoid error, the caption may require the signer to type or print his name in addition to the handwritten signature. When a signature is imperative, a display type or dingbats may be used to attract attention of the signer. Figure 65 demonstrates this.

Preprinted Names

If a form is to be stocked for continuous use, the personal name or signature of an official should be preprinted only on special justification or by legal requirement. This will avoid making obsolete large stocks of forms by personnel changes. Preprinting of titles only, the use of rubber stamps, or automatic signature inscribers are alternatives to be considered. When the title of an official is not preprinted, it aids him in delegating signing authority to his subordinates.

Oaths and Penalty Statements

The Bureau of the Budget, under the Federal Reports Act of 1942 (5 USC 139), will not approve the use of an oath unless the agency presents an exceptionally good reason. Although an oath is required by statute, the Bureau of the Budget can require that the oath be worded simply or give approval contingent upon a simplified procedure of execution. In lieu of an oath, a declaration regarding the criminal penalties for deliberate falsification may be included on a form. Examples of acceptable language are:

1. For Claims Forms—A knowingly false claim is a criminal offense, U.S. Code, Title 18, Sec. 287 (formerly Sec. 80).
2. For forms not involving claims—One of the following methods may be used:
   a. Willfully false statements on this form can be punished by fine or imprisonment. U.S. Code, Title 18, Sec. 1001 (formerly Sec. 80).
   b. A willfully false certification is a criminal offense. U.S. Code, Title 18, Sec. 1001 (formerly Sec. 80).
   c. The U.S. Code, Title 18 (Crimes and Criminal Procedure), Section 1001 (formerly Sec. 80), makes it a criminal offense to make a willfully false statement or misrepresentation to any department or agency of the United States as to any matter within its jurisdiction.

CONTINUATION OF FORM ON BACK

If a form is continued on the back, the word "Over" should be placed at the bottom of the front. This will avoid the user's overlooking items to be filled in on the back.

Sometimes the person filling in the form may use the back for "Remarks" or to continue the answer to a question started on the front. For convenience, an X-box may be provided with the caption "Over" or "See Reverse for Remarks." Then the writer merely places an "X" in the box to indicate that there is information on the back of the form. This also alerts the person processing the form to look on the back. These two techniques are illustrated in figure 64.

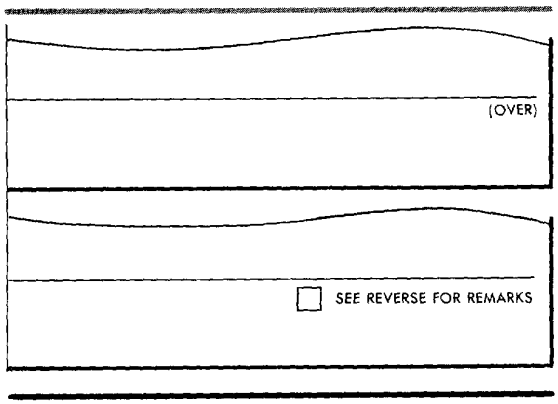


Figure 64

USE OF SIGNATURE CAPTIONS

Caption designates who is to sign

SIGNATURE OF VETERAN

Part heading designates who is to sign each part of form

TO BE FILLED IN BY APPLICANT

SIGNATURE

TO BE FILLED IN BY PLACEMENT OFFICER

SIGNATURE

Caption indicates only form properly signed will be accepted

SIGNATURE OF VETERAN *(Do not print)*

Captions eliminate doubt if handwriting is not readable

TYPE OR PRINT NAME | SIGNATURE

Caption used when special signer is not designated

SIGNATURE | TITLE

Caption used to attract signer

PLEASE SIGN → HERE | SIGNATURE OF AGENT

Figure 65

IV. TYPE FACES, RULES, AND VISUAL AIDS

In determining the type faces, rules, and visual aids to be used for a form, the objectives to be achieved are:

- Readability
- Speed of comprehension
- Simplicity
- Good appearance
- Uniformity

A few type faces should be adopted as standard and the same type face should be used for items of equal importance. Variations in typographical detail may be used for emphasis.

TYPE FACES

The selection of type is an important phase of forms design. The condition under which a form is used governs the selection of type which ultimately affects its readability and appearance.

Gothic Type

The gothic series originally was developed by copying copperplate engravings. This gothic series is particularly good when economy of space on a form is important. Also, after a form is filled in, the box heads (captions) recede into the background, and the fill-in data may be quickly read.

Italic Type

Italic type was used in early informal written manuscripts; but currently, most italics are sloped modifications of roman letters and are intended for use as companions of the roman letters. Italics are used with gothic types on box design forms when the box heads need amplifying statements. Figure 66 shows the use of these type faces.

Roman Type

Roman was used in writing medieval manuscripts and is the one that was carved on the stone pediments of Roman buildings. It is noted for its legibility and is the familiar style in books printed in Latin, English, French, Spanish, Italian, and Portuguese. There are six distinctive classes of roman types:

1. Oldstyle Antique Roman (Bookman)
2. Normal Oldstyle Roman (Garamond)
3. Informal Oldstyle Roman (Caslon)
4. Traditional Roman (Baskerville)
5. Modern Roman (Bodoni)
6. Sans Serif

Because of its legibility, roman type is the best when there are large masses of printed matter on the form. For example, it is best on lengthy instructions such as the U.S. Individual Income Tax Return, or on forms with a verbose stub, as shown in figure 67.

RULE WEIGHTS

Rules or lines serve primarily as guides to facilitate the use of the form. Rules are necessary to separate box or column headings from the body of the form, to break up a form into sections, or to serve as writing lines. They also provide an inexhaustible supply for variety in embellishing otherwise dull material; help to provide real visual interest; and accentuate certain parts of the form.

To be effective, rules should be limited to a few simple variations. Insufficient or superflous lines, or too many heavy or dash lines make a form difficult to read.

Some agencies limit rules to a light single rule (hairline) for writing lines, a medium rule (½-point) for dividing sections or other major groups and a heavy rule (1-point) for special sections which require emphasis. Leader or dash lines are used to lead the eyes to neighboring areas, such as items in columnar style.

How to select the various rule weights is the theme of figure 68.

For letterpress printing, the rules are cut and fitted; both the lettering and rules are printed

WHEN TO USE GOTHIC TYPE

HARD TO READ

7. SEX ☐ MALE ☐ FEMALE | 8. CLAIM NO. C–

RECEIVING STATION ONLY

9. DATE OF RECEIPT | 10. DATE SCHED. OR AUTH. | 11. DATE COMPLETED

12. PLACE OF EXAMINATION *(Check one)*
☐ CLINIC ☐ FEE ☐ OTHER STATION

13. NAME OF FEE EXAMINER OR OTHER STATION

14. EXAMINATION SCHEDULED
☐ AT ONCE ☐ OTHER *(Specify date)*

15. PURPOSE OF EXAMINATION *(Check appropriate boxes)*
☐ TERMINAL ☐ ORIGINAL (S. C.) ☐ REOPENED
☐ POW ☐ ORIGINAL (N. S. C.) ☐ INCREASE
☐ COMBAT INITIAL ☐ CONVALESCENT ☐ REVIEW

EASIER TO READ

16. REQUIRE MEDICA
☐ COMPETENCY

17. SIGNATURE OF A
(ch., Clm. Div.)

7. SEX ☐ MALE ☐ FEMALE | 8. CLAIM NO. C-

RECEIVING STATION ONLY

9. DATE OF RECEIPT | 10. DATE SCHED. OR AUTH. | 11. DATE COMPLETED

12. PLACE OF EXAMINATION *(Check one)*
☐ CLINIC ☐ FEE ☐ OTHER STATION

13. NAME OF FEE EXAMINER OR OTHER STATION

14. EXAMINATION SCHEDULED
☐ AT ONCE ☐ OTHER *(Specify date)*

15. PURPOSE OF EXAMINATION *(Check appropriate boxes)*
☐ TERMINAL ☐ ORIGINAL (S. C.) ☐ REOPENED
☐ POW ☐ ORIGINAL (N. S. C.) ☐ INCREASE
☐ COMBAT INITIAL ☐ CONVALESCENT ☐ REVIEW
☐ OTHER *(Specify)*

16. REQUIRE MEDICAL DETERMINATION OF *(Check one)*
☐ COMPETENCY ☐ NEED FOR AID AND ATTENDANCE *(Provide VA Form 10–2680)*

17. SIGNATURE OF ADJ. OFFICER OR ASST. *(Ch., Clm. Div.)* | 18. SYMBOL

Figure 66

WHEN NOT TO USE GOTHIC TYPE

HARD TO READ

ITEM 13.—ANALYSIS OF SALES BY COMMODITY LINES — REPORT THE DOLLAR VOLUME OF SALES ON RECORDS ARE NOT AVAILABLE, GIVE

	4	Code
TOTAL SALES—(TOTAL OF SALES BY COMMODITY LINES SHOULD BE SAME AS TOTAL SALES 1958, ITEM 7a)	$	0
ELECTRICAL APPARATUS AND SUPPLIES		
1. ELECTRICAL RESIDENTIAL SPACE HEATING EQUIPMENT (EXCEPT PORTABLE)	$	704220
2. ELECTRICAL WIRING SUPPLIES, CONSTRUCTION MATERIALS, TOTAL (SUM OF LINES A THROUGH D)	$	603100
A. INTERIOR WIRING, CONSTRUCTION MATERIALS	$	603101
B. OUTSIDE CONSTRUCTION MATERIALS	$	603102
C. LIGHTING FIXTURES	$	603103
D. ELECTRIC LAMPS (INCANDESCENT AND FLUORESCENT)	$	603104
ELECTRICAL APPLIANCES AND COMMERCIAL EQUIPMENT		
EVISION SETS, TOTAL (SUM OF LINES A	$	604110
A. RADIO SETS, A		
B. TELEVISION SE		
C. RECORD PLAYER		

EASIER TO READ

ITEM 13.—ANALYSIS OF SALES BY COMMODITY LINES — Report the dollar v on records are not a

	4	Code
Total sales—(Total of sales by commodity lines should be same as Total Sales 1958, Item 7a)	$	0
Electrical apparatus and supplies		
1. Electrical residential space heating equipment (except portable)	$	704220
2. Electrical wiring supplies, construction materials, total (sum of lines a through d)	$	603100
a. Interior wiring, construction materials	$	603101
b. Outside construction materials	$	603102
c. Lighting fixtures	$	603103
d. Electric lamps (incandescent and fluorescent)	$	603104
Electrical appliances and commercial equipment		
5. Electrical appliances, radio and television sets, total (sum of lines a through g)	$	604110
a. Radio sets, all types	$	604111
b. Television sets	$	604112
c. Record players, tape recorders	$	604113

Figure 67

APPLICATION OF RULE WEIGHTS

HAIRLINE

CAPTION	CAPTION
CAPTION	CAPTION

Generally satisfactory to set off individual items, vertically and horizontally.

CAPTION	CAPTION

Used as a writing guide on columnar or tabular forms, particularly when handwritten.

ONE-HALF POINT OR THREE-FOURTHS POINT

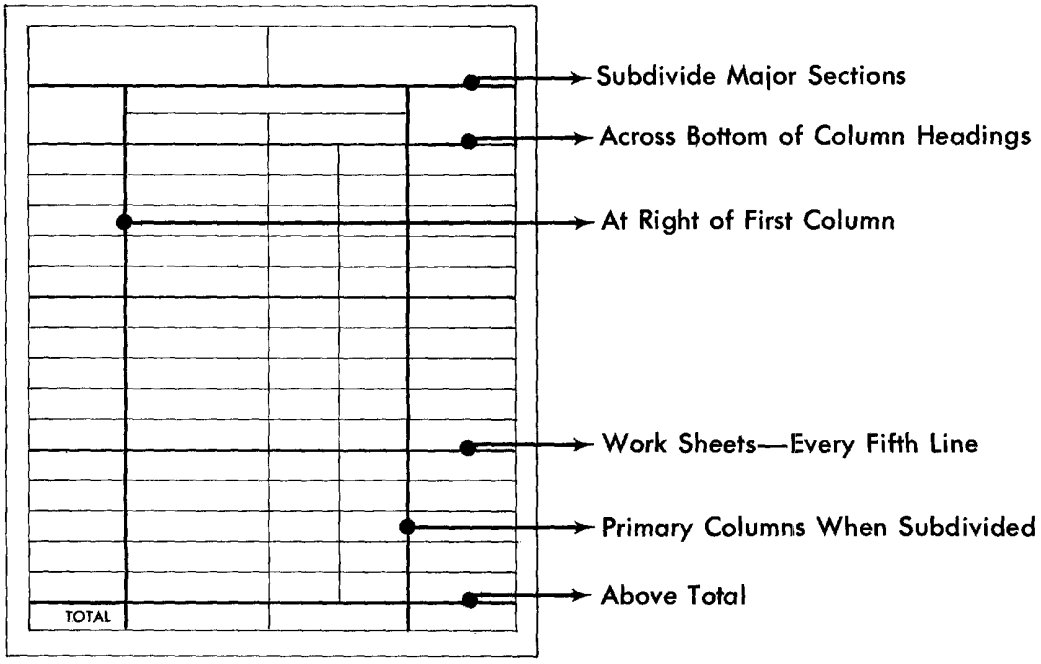
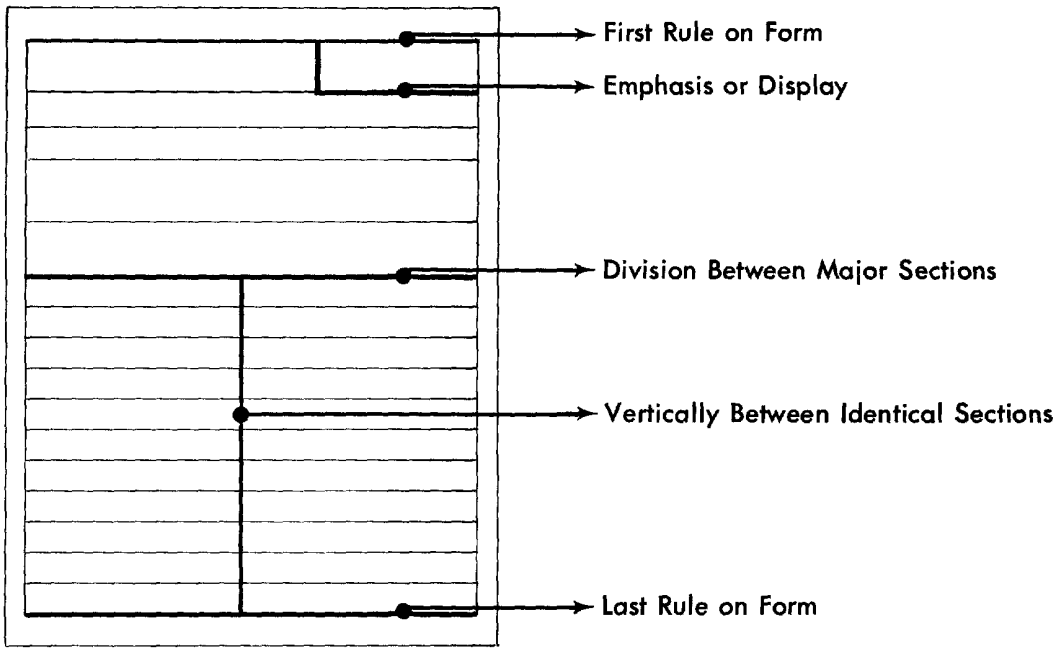


Figure 68

APPLICATION OF RULE WEIGHTS

ONE POINT SOLID OR ONE AND ONE-HALF POINT SOLID



ONE-HALF POINT PARALLEL

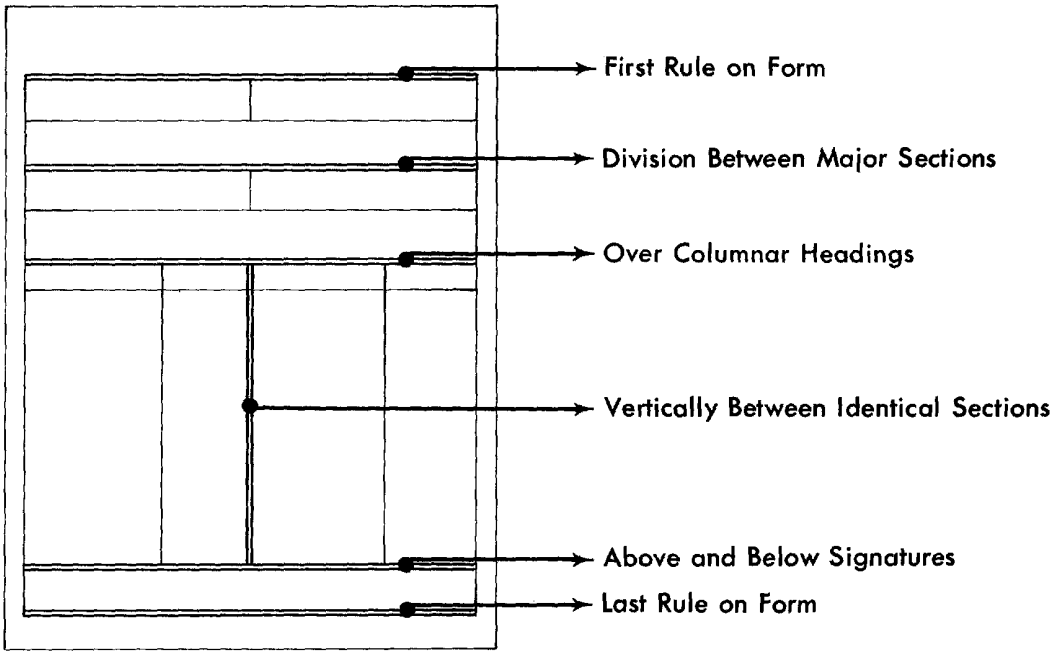
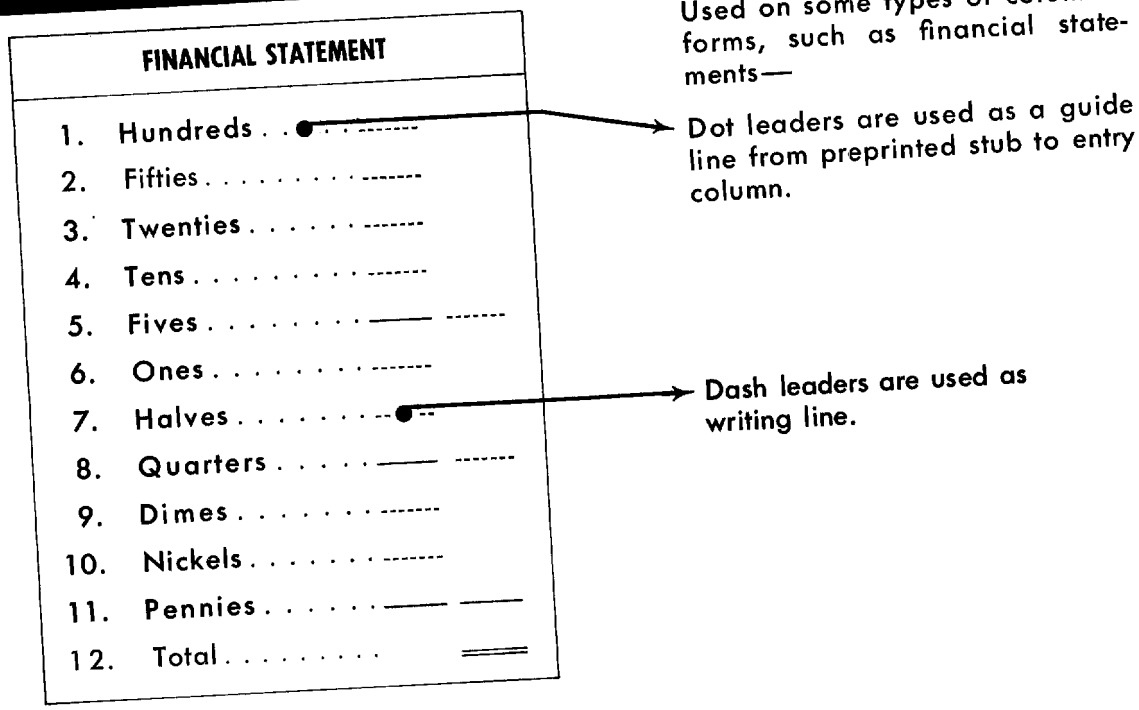


Figure 68—Continued

APPLICATION OF RULE WEIGHTS

LEADER LINES



USE OF LINE WEIGHTS

Hairlines or leader lines used primarily to guide the eye.	
Medium lines or one-half-parallels used primarily to attract the eye.	
Bold lines used to stop the eye.	
Dingbats and reverse printing used to attract or stop the eye.	★ ➡ ▶ ● REVERSE PRINTING

Figure 68—Continued

at the same time. Therefore, there is always a small break at the crossing points when the form has horizontal and vertical crosslines. For offset printing, the rules are hand-drawn.

Border Rules

Some agencies feel that only top and bottom rules are necessary on a form. Other agencies feel that a border rule on all sides of a form improve its appearance. The use of side rules is a matter of personal preference in one agency or another. Extra makeup time is required, however, to fit and miter corners of border rules when forms are typeset for letterpress printing.

Another delay in production may come about because of wrinkles in the paper as it passes through the printing press.

Pen Ruling

Pen ruling is used mainly on accounting forms where figure entries are made in alined columns, and two or more colors are desired to distinguish them.

Pen ruling is a bindery operation performed by a machine which is equipped with pens. As the paper passes beneath the pens, lines are drawn. Usually, the pens cross the sheet from extreme edge to extreme edge, thus providing the "bleed" effect peculiar to pen ruling. It is possible, however, to lift the pens from the paper by mechanical "stops" on the ruling machine, thus providing clear spaces. The ruling machine does not print words on the paper. That is done on a printing press, therefore, two operations are required when pen ruling is specified.

The need for pen ruling should always be questioned as it is a slow and costly operation. Its main characteristics are that the lines are almost always in color, seldom in black, and that the lines of different colors or intensities can be made in the same operation on the ruling machine.

A substitute method is the one-way screened rules which are produced combining positives of the screened rules with positives of the type matter and solid rules. This entails an overlay for separation and a small charge for extra negatives and positives. Forms are printed by the offset method.

Screened rules should be specified to the printer; otherwise he will furnish solid rules. Figure 69 shows one-way screened rules which are suggested as standard for ruled forms.

SUBSTITUTE METHOD FOR PEN RULING

CHARTER NO.

R BOOKS	ESTIMATED SOUND VALUE	
CREDIT	ASSETS	LIABILITIES

Screening some of the rules produces a contrast.

TYPES OF SCREENING

2S	2 point
√S	Parallel hairline
½S	½ point and hairline
10S	Parallel ½ point
11S	Parallel ¾ point
12S	Parallel 1 point

Figure 69

VISUAL AIDS

To increase readability, certain parts of a form sometimes need to be emphasized. Some of the ways to give emphasis, other than by the use of type faces, is by the use of rules, dingbats, and reverse printing.

Lines on a form guide, attract, or stop the eye. For example, on a columnar or tabular worksheet, a heavy line is used every fifth line to guide the eye across the form; lines separating major groupings of columns are made

prominent to stop the eye. To attract attention to a specific box, a heavy line is used for emphasis. These techniques are illustrated in figure 68.

Dingbats, such as a series of dots or an arrow, have a strong leading influence upon the direction the eye will take as shown in figure 68.

Reverse printing is the opposite to the normal dark printing on a light background. For example, white printing on a black background as depicted in figure 68. That part of the form having a dark background stands out over the rest of the form.

COMPOSITION

The dictionary definition of composition under subheading "printing" is simply the "setting of type." This handbook is being limited to composition for the letterpress and offset methods, since these methods produce the majority of the Government's forms.

Letterpress

Composition for letterpress printing is set in metal type. Reproduction is accomplished by direct printing from raised type. Figure 72 is a guide for selecting type faces for typeset composition.

The forms analyst indicates on the form layout the type sizes and styles, and rule weights to be used. This is called "marking up" the copy. When a form is to be filled in by typewriter, the marking should include a notation "Typewriter spacing must be maintained." The importance of this notation cannot be over-emphasized since its omission causes hand-positioning of the typewriter platen in completing each entry line.

Printing Measurement. The standard for type measurement is the point system. The point is used to measure the thickness of a piece of type.

12 points equal 1 pica
6 picas equal 1 inch
72 points equal 1 inch

A line or column of type that measures 3 inches across is an 18-pica column (6 picas to an inch, times 3). Rulers graduated in units of 6, 8, 10, and 12 points, as well as in inches, can be purchased for measuring type.

The most commonly used sizes of type for box design are 6 and 8 point. The size most commonly used for instruction and other text material is 8 or 10 point. The larger display types used for titles, or to draw attention include 10, 12, and 14 point.

Leading. Lines of type may be solid (snugly together) or opened up by inserting thin lead strips between them. The thin strips of metal are called leads. The process of inserting them is called leading.

Leads most commonly used are 1 point and 2 point. If the type is to be leaded, add the point size of the lead to the size of the type face. Thus, for 8 point type with 1 point lead, use 9 point type for the basis of computation; and for 8 point type with 2 point lead, compute on the basis of 10 point type. Figure 70 is 2 point leaded. Figure 71 is set solid with no leads.

"The fundamental purpose of printing is to be read, but sometimes it is designed so poorly that it defeats its purpose. Before the artist begins to design a piece of printing, he must understand its purpose and the ideas it is intended to convey. It is to be purely informational? Will it be illustrated? Who will read it? It is for reference, or will it be read page

Figure 70

"The fundamental purpose of printing is to be read, but sometimes it is designed so poorly that it defeats its purpose. Before the artist begins to design a piece of printing, he must understand its purpose and the ideas it is intended to convey. It is to be purely informational? Will it be illustrated? Who will read it? It is for reference, or will it be read page by page? How many copies are to be printed? Should it be done in black and white or in color? Will the book be read by people of limited

Figure 71

Offset

Any copy which can be photographed may be reproduced by the offset method. In this process reproduction is accomplished by trans-

TYPE SELECTION GUIDE—GPO

A condensed type face should be considered if the one shown does not fit into available space. See the publication "Specimens of Type Faces in the U.S. Government Printing Office."

CAPS—all letters in CAPITALS S.C.—all letters in SMALL CAPITALS C. & lc.—Caps and lower case

Element of form	Typeset		Fotosetter	
	Type name and case No.	Character count	Type name and case No.	Character count
IDENTIFICATION				
Form Titles:				
General	GOTHIC 353 s.c 354 s.c SANS SERIF 843 CAPS 844 CAPS	9 7 8 7	FUTURA 823 CAPS 824 CAPS 843–L18 844½–L24	11 9 9 7
Limited Space	GOTHIC 415 CAPS 414 CAPS	13 11	660 CAPS 659 CAPS	12 14
Small Forms (Index and Identification cards—extremely limited space)	413 CAPS	16	658 CAPS	16
Agency Name	332 CAPS	12	801½–L14 CAPS	14
Control Symbols (Bureau of the Budget or Comptroller General).	332 s.c	14	800–L10 CAPS	19
	BOOKMAN 149 *italics CAPS*	13	O800½–L11 CAPS	19
Form Number	GOTHIC 353 (No. 1)	11	803–L18 large fig.	11
	SANS SERIF 822	13	822½	12
Edition Date	GOTHIC 332 s.c	14	800–L10 CAPS	19
Supersession Notice	332 s.c	14	800–L10 CAPS	19
	BOOKMAN 149 *italics C. & lc*	18	O800–L10 C. & lc	25
INSTRUCTIONS				
Short under title	BOOKMAN 150 C. & lc 150 *italics C. & lc*	16 14	FUTURA 801½–L14 C. & lc O801½–L14	17 18
Extensive	150 C. & lc 151 C. & lc	16 14	GARAMOND 107–L12 C. & lc 108 C. & lc	17 15
Emphasis	Matching *italics* or CAPS		Matching *italics* or CAPS	
BOX WORDING				
Upper Left Captions	GOTHIC 332 s.c	14	FUTURA 800–L10 CAPS	19
Amplifying instructions to captions	BOOKMAN 149 *italics C. & lc*	18	O800–L10 C. & lc	25

Figure 72

TYPE SELECTION GUIDE—GPO—Continued

A condensed type face should be considered if one shown does not fit into available space. See the publication "Specimens of Type Faces in the U.S. Government Printing Office."

CAPS—all letters in CAPITALS S.C.—all letters in SMALL CAPITALS C. & lc.—Caps and lower case

Element of form	Typeset		Fotosetter	
	Type name and case No.	Character count	Type name and case No.	Character count
COLUMNAR ARRANGEMENT				
	GOTHIC		FUTURA	
One Step Head	332 s.c	14	800–L10 CAPS	19
Two Step Head:				
Primary	332 CAPS	12	801–L12 CAPS	16
Secondary	332 s.c	14	800–L10 CAPS	19
Three Step Head:				
Primary	333 CAPS	11	801½–L14 CAPS	14
Secondary	332 CAPS	12	801–L12 CAPS	16
Tertiary	332 s.c	14	800–L10 CAPS	19
STUB CAPTIONS				
	GOTHIC		FUTURA	
Short	332 s.c	14	800–L10 CAPS	19
	BOOKMAN		FUTURA	
Lengthy	150 C. & lc	16	801½–L14 C. & lc	17
	GOTHIC		FUTURA	
PART, SECTION, OR GROUP HEAD	351 s.c	13	822 CAPS	12
	352 s.c	11	822½ CAPS	12
	SANS SERIF		658 CAPS	16
	821 CAPS	13		
	GOTHIC		FUTURA	
TOTALS	352 s.c	11	822 CAPS	12
	SANS SERIF		658 CAPS	16
	821 CAPS	13		
	SANS SERIF		FUTURA	
SUBTOTALS	821 C. & lc	17	822 C. & lc	15
	BOOKMAN			
	149 *italics*—*CAPS*	13	O800–L10 CAPS	20
	BOOKMAN		FUTURA	
FOOTNOTES	149 C. & lc	21	800–L10 C & lc	24
	149 *italics C. & lc*	18	O800–L10 C. & lc	25

Figure 72—Continued

ferring the photographed image to a sensitized plate, then, to a rubber blanket, thence to the paper.

Varityper or Fotosetter. The varityper or fotosetter machine provides a variety of type sizes and styles similar to the ones used in typeset. The forms analyst selects the type faces to be used, and "marks up" the form layout as illustrated in figure 10. The compositor follows the markings in preparing copy for reproduction. Figures 73 and 74 are guides for selecting varitype type faces, and figure 72 is for fotosetter composition.

TYPE SELECTION GUIDE—STANDARD VARITYPER

Consider reduction if the actual size type face does not fit into available space.

CAPS—all letters in CAPITALS s. c.—all letters in SMALL CAPITALS C. & lc.—Caps and lower case

Element of form	Actual size		25 percent reduction			33⅓ percent reduction		
	Type name and font No.	Character count	Type name and font No.	Character count		Type name and font No.	Character count	
				Before reduction	After reduction		Before reduction	After reduction
IDENTIFICATION								
Form Titles:								
General	GOTHIC		GOTHIC			GOTHIC		
	229 CAPS	12	434–14 CAPS	10	13	434–14 CAPS	10	15
	434–14 CAPS	10	(1)	(1)	(1)	(1)	(1)	(1)
Limited Space	270 CAPS	14	229 CAPS	12	16	229 CAPS	12	18
Small Forms (Index and Identification Cards—extremely limited space)	180-LB CAPS	16	270 CAPS	14	18.5	229 CAPS	12	18
Agency Name	350–4 CAPS	14	350–5 CAPS	12	16	350–6 CAPS	10	15
	270 CAPS	14	229 CAPS	12	16	229 CAPS	12	18
Control Symbols (Bureau of the Budget or Comptroller General)	350–4 s.c	14	350–5 s.c	12	16	350–5 s.c	12	18
	LITHO BOOK		LITHO BOOK			LITHO BOOK		
	315–6 CAPS	16	315–8 CAPS	14	18.5	315–10 CAPS	14	21
	GOTHIC		GOTHIC			GOTHIC		
Form Number	270	14	229	12	16	434–14	10	15
			(1)	(1)	(1)	(1)	(1)	(1)
Edition Date	350–4 s.c	14	350–5 s.c	12	16	350–5 s.c	12	18
Supersession Notice	350–4 s.c	14	350–5 s.c	12	16	350–5 s.c	12	18
	LITHO BOOK		LITHO BOOK			LITHO BOOK		
	315–8 C. & lc	16	315–10 C. & lc	14	18.5	315–12 C. & lc	12	18
INSTRUCTIONS								
	LITHO BOOK		LITHO BOOK			LITHO BOOK		
Short under title	315–8 C. & lc	16	315–10 C. & lc	14	18.5	315–12 C. & lc	12	18
Extensive	310–8 C. & lc	16	310–10 C. & lc	14	18.5	310–12 C. & lc	12	18
	310–10 C. & lc	14	310–12 C. & lc	12	16	310–12 C. & lc	12	18
Emphasis	Matching		Matching			Matching		
	italics		*italics*			*italics*		
	or		or			or		
	CAPS		CAPS			CAPS		
BOX WORDING								
	GOTHIC		GOTHIC			GOTHIC		
Upper Left Captions	350–4 s.c	14	350–5 s.c	12	16	350–5 s.c	12	18

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Amplifying instructions to captions	LITHO BOOK 315–8 C. & lc	16	LITHO BOOK 315–10 C. & lc	14	18. 5	LITHO BOOK 315–10 C. & lc	14	21
COLUMNAR ARRANGEMENT								
One Step Head	GOTHIC 350–4 CAPS	14	GOTHIC 350–5 CAPS	12	16	GOTHIC 350–6 CAPS	10	15
Two Step Head:								
Primary	350–4 CAPS	14	350–5 CAPS	12	16	350–6 CAPS	10	15
Secondary	350–4 s.c	14	350–4 CAPS	14	18. 5	350–5 CAPS	12	18
Three Step Head:								
Primary	350–5 CAPS	12	350–6 CAPS	10	13	350–6 CAPS	10	15
Secondary	350–4 CAPS	14	350–5 CAPS	12	16	350–5 CAPS	12	18
Tertiary	350–4 s.c	14	350–4 CAPS	14	18. 5	350–4 CAPS	12	18
STUB CAPTIONS								
Short	GOTHIC 350–4 s.c	14	GOTHIC 350–5 s.c	12	16	GOTHIC 350–5 s.c	12	18
Lengthy	LITHO BOOK 310–10 C. & lc	14	LITHO BOOK 310–12 C. & lc	12	16	LITHO BOOK 310–12 C. & lc	12	16
PART, SECTION, OR GROUP HEAD	GOTHIC 270 CAPS	14	GOTHIC 229 CAPS	12	16	GOTHIC 434–14 CAPS	10	15
	180 LB CAPS	16	270 CAPS	14	18. 5	229 CAPS	12	18
TOTALS	GOTHIC 180 LB CAPS	16	GOTHIC 270 CAPS	14	18. 5	GOTHIC 229 CAPS	12	18
	LITHO BOOK 315–8 CAPS	16	LITHO BOOK 315–10 CAPS	14	18. 5	LITHO BOOK 315–10 CAPS	14	21
SUBTOTALS	350–4 s.c	14	350–5 s.c	12	16	350–6 s.c	10	15
	LITHO BOOK 315–8 C. & cl	16	LITHO BOOK 315–10 C. & lc	14	18. 5	LITHO BOOK 315–10 C. & lc	14	21
FOOTNOTES	315–6 C. & lc	18	315–8 C. & lc	16	21	315–10 C. & lc	14	21
	310–6 C. & lc	18	310–8 C. & lc	16	21	310–10 C. & lc	14	21

[1] Consider a burnished-down type if a larger type face is desired.

Boxes

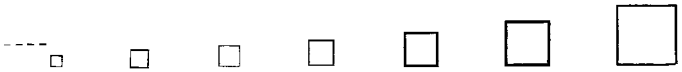

Figure 73

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TYPE SELECTION GUIDE—PROPORTIONAL SPACING VARITYPER

Consider reduction if the actual size type face does not fit into available space.

CAPS—all letters in CAPITALS s. c.—all letters in SMALL CAPITALS C. & lc.—Caps & lower case

Element of form	Actual size		25 percent reduction			33⅓ percent reduction		
	Type name and font No.	Character count	Type name and font No.	Character count		Type name and font No.	Character count	
				Before reduction	After reduction		Before reduction	After reduction
IDENTIFICATION								
Form Titles:	SANS SERIF		SANS SERIF			SANS SERIF		
General	670–10B CAPS	12	670–12A CAPS	11	14. 5	670–12A CAPS	11	16. 5
			(1)	(1)	(1)	(1)	(1)	(1)
Limited Space	670–8C CAPS	13	670–10B CAPS	12	16	670–10B CAPS	12	18
Small Forms (Index and identification cards — extremely limited space)	670–7D CAPS	15	670–8C CAPS	13	17	670–10B CAPS	12	18
	GOTHIC		GOTHIC			GOTHIC		
Agency Name	800–4D CAPS	15	800–6C CAPS	13	17	800–8B CAPS	12	18
Control Symbols (Bureau of the Budget or Comptroller)	800–2D CAPS	15	800–4D CAPS	15	20	800–6C CAPS	13	19. 5
	BOOKMAN		BOOKMAN			BOOKMAN		
	635–6D CAPS	15	635–8C CAPS	13	17	635–10B CAPS	12	18
	SANS SERIF		SANS SERIF			SANS SERIF		
Form Number	670–10B	16	670–12A	13	17	670–12A	13	19. 5
			(1)	(1)	(1)	(1)	(1)	(1)
	GOTHIC		GOTHIC			GOTHIC		
Edition Date	800–4D CAPS	15	800–6C CAPS	13	17	800–8B CAPS	12	18
Supersession Notice	800–2D CAPS	15	800–4D CAPS	15	20	800–6C CAPS	13	19. 5
	BOOKMAN		BOOKMAN			BOOKMAN		
	635–8C C. & lc.	18	635–10B C. & lc.	15	20	635–10B C. & lc.	16	24
INSTRUCTIONS	BOOKMAN		BOOKMAN			BOOKMAN		
Short under title	630–8C C. & lc.	18	630–10B C. & lc.	16	21	630–10B C. & lc.	16	24
	635–8C C. & lc.	18	635–10B C. & lc.	16	21	635–10B C. & lc.	16	24
Extensive	630–8C C. & lc.	18	630–10B C. & lc.	16	21	630–10B C. & lc.	16	24
			BODONI			BODONI		
	630–10B C. & lc.	16	600–12A C. & lc.	14	18. 5	600–12A C. & lc.	14	21
Emphasis	Matching *italics* or CAPS		Matching *italics* or CAPS			Matching *italics* or CAPS		

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BOX WORDING								
Upper Left Captions	GOTHIC 800–4D CAPS	15	GOTHIC 800–6C CAPS	13	17	GOTHIC 800–8B CAPS	12	18
Amplifying instructions to captions	BOOKMAN 635–6D C. & lc.	20	BOOKMAN 635–8C C. & lc.	18	24	BOOKMAN 635–10B C. & lc.	16	24
COLUMNAR ARRANGEMENT								
One Step Head	GOTHIC 800–4D CAPS	15	GOTHIC 800–6C CAPS	13	17	GOTHIC 800–8B CAPS	12	18
Two Step Head:								
Primary	800–4D CAPS	15	800–6C CAPS	13	17	800–8B CAPS	12	18
Secondary	800–2D CAPS	15	800–4D CAPS	15	20	800–6C CAPS	13	19. 5
Three Step Head:								
Primary	800–6C CAPS	13	800–8B CAPS	12	16	800–10B CAPS	12	18
Secondary	800–4D CAPS	15	800–6C CAPS	13	17	800–8B CAPS	12	18
Tertiary	800–2D CAPS	15	800–4D CAPS	15	20	800–6C CAPS	13	19. 5
STUB CAPTIONS								
Short	GOTHIC 800–4D CAPS	15	GOTHIC 800–6C CAPS	13	17	GOTHIC 800–8B CAPS	12	18
Lengthy	BOOKMAN 630–8C C. & lc.	18	BOOKMAN 630–10B C. & lc.	16	21	BOOKMAN 630–10B C. & lc.	16	24
PART, SECTION, OR GROUP HEAD	SANS SERIF 670–10B CAPS	12	SANS SERIF 670–12A CAPS	11	14. 5	SANS SERIF 670–12A CAPS	11	16. 5
	670–8C CAPS	13	670–10B CAPS	12	16	670–12A CAPS	11	16. 5
TOTALS	SANS SERIF 670–7D CAPS	15	SANS SERIF 670–8C CAPS	13	17	SANS SERIF 670–10B CAPS	12	18
	BOOKMAN 635–6D CAPS	14	BOOKMAN 635–8C CAPS	13	17	BOOKMAN 635–10B CAPS	12	18
SUBTOTALS	SANS SERIF 670–7D C. & lc.	20	SANS SERIF 670–8C C. & lc.	18	24	SANS SERIF 670–10B C. & lc.	16	24
	BOOKMAN 635–6D C. & lc.	20	BOOKMAN 635–8C C. & lc.	18	24	BOOKMAN 635–10B C. & lc.	16	24
FOOTNOTES	BOOKMAN 635–6D C. & lc.	20	BOOKMAN 635–8C C. & lc.	18	24	BOOKMAN 635–10B C. & lc.	16	24
	630–6D C. & lc.	21	630–8C C. & lc.	18	24	630–10B C. & lc.	16	24

[1] Consider a burnished-down type if a larger type face is desired.

Figure 74

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Photographic Reduction. Some forms contain printed matter (box captions, column and section heads, and text) which exceeds the space required for the fill-in data. Sometimes this necessitates the printing of a larger form, printing on the back of a form, or using a second sheet. The larger form, reverse printing, or extra sheet may be eliminated by designing the form for reduction when printed. This technique permits the use of a greater number of characters of a specific type face in the various spaces allotted.

The usual practice is to draw the design larger for a 25 or a 33⅓ percent reduction which is later reduced photographically to the desired size. Some agencies have developed design guide sheets for this purpose.

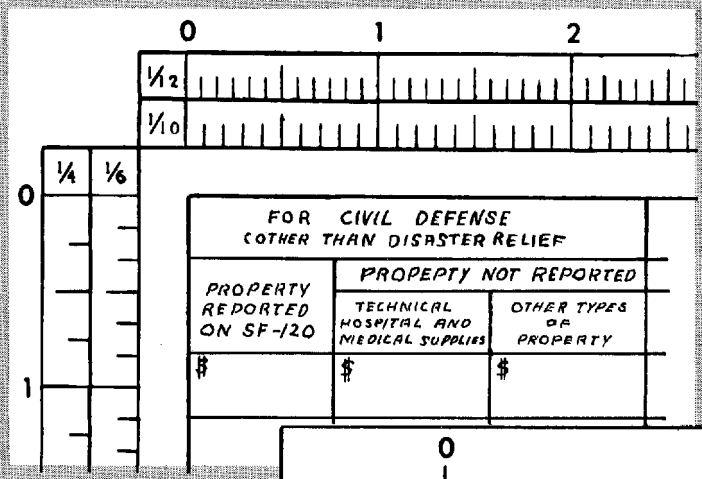
The forms analyst accurately determines that the reduction of the type used will not result in its becoming illegible or difficult to read. If a 12-point typewriter face is used, an 8-point face is obtained by reducing the copy one-third, and a 6-point face by reducing it one-half. This calls for some advance thinking!

See figure 75.

PHOTOGRAPHIC REDUCTION

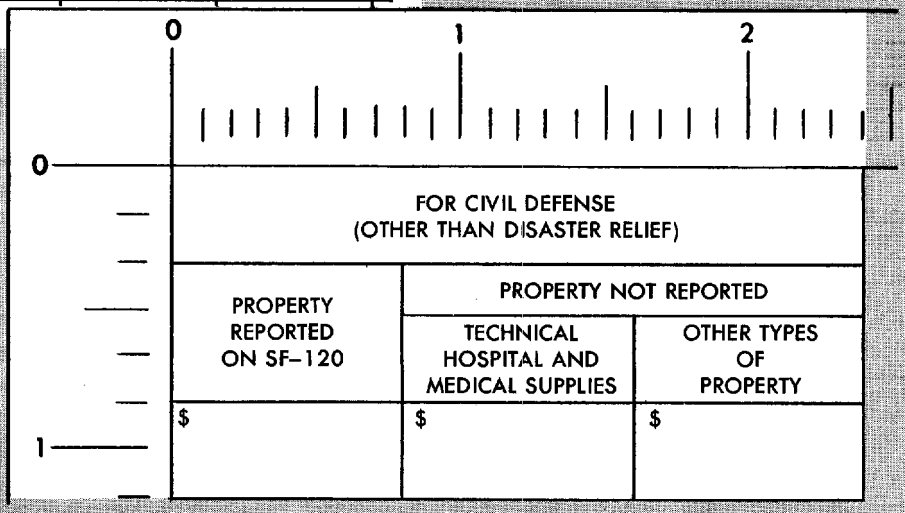
Step 1—Analyst finds space required for printed matter exceeds that required for the fill-in data

FOR CIVIL DEFENSE (OTHER THAN DISASTER RELIEF)		
PROPERTY REPORTED ON SF 120	PROPERTY NOT REPORTED	
	TECHNICAL HOSPITAL AND MEDICAL SUPPLIES	OTHER TYPES OF PROPERTY
$	$	$



Step 2—Analyst designs form on standard layout sheet for fill-in spacing

Step 3—Analyst has final copy prepared on a 25% or 33-1/3% reduction sheet, whichever is needed to accommodate printed matter



FOR CIVIL DEFENSE (OTHER THAN DISASTER RELIEF)		
PROPERTY REPORTED ON SF 120	PROPERTY NOT REPORTED	
	TECHNICAL HOSPITAL AND MEDICAL SUPPLIES	OTHER TYPES OF PROPERTY
$	$	$

Step 4—When copy is printed at 33-1/3% reduction

- The printed matter is not crowded
- The fill-in space is adequate for writing entries

Figure 75

V. FORMS CONSTRUCTION

"Construction" is a term which covers the manufacturing of the form. Paper and ink are the basic ingredients. Yet, features such as perforating, scoring, folding, punching, and padding may be required to make easier the reading, filling in, processing, and handling of a form. The forms analyst develops printing specifications for each form (described in Chapter VI) which prescribe the construction of that form.

PAPER

Paper for forms is selected on the basis of the factors listed in figure 76. The mere recital of these factors indicates that the forms analyst needs to have many more facts about paper than a general handbook can supply. Fortunately there are treatises available for the specialist.

DECIDING WHAT KIND OF PAPER TO USE

Suitability of surface for:

- Writing method used in making entries
- Printing or duplicating process involved
- Erasures which may be necessary
- Safety (protection against alterations in entries made on certain forms)
- Visual efficiency (appropriate opaqueness for two-sided printing)

Suitability of weight, thickness, and durability for:

- Number of carbon copies required
- Handling required in use
- Office machines in which used
- Filing method
- Retention period

Cost in relation to other factors

Figure 76

Chemical wood writing (sulphite) paper is available in three weights—24, 32, and 40 substance. The rag content bond papers are available in three different grades (25%, 50%, and 100%). The sulphite writing papers normally do the job as well as the more expensive rag content bond papers unless the form is to be retained as a permanent record, subjected to humid weather, or to frequent handling. One example of over-use of high grade papers is cited in figure 77.

CASE STUDY

A few years ago the General Accounting Office studied the Standard Forms prescribed by that office to determine whether the quality and weight of paper could be reduced. The Bureau of the Budget, Government Printing Office, and the Federal Supply Service cooperated and participated in the survey. The "Standard Paper Samples and Description of their Uses," issued by the Government Printing Office, served as a guide. The quality and weight of these forms were reduced with no detrimental effect on their operating use and durability, resulting in an annual recurring saving of $112,000.

Figure 77

Weights of Paper

Paper is ordered on the basis of weight and thickness. Their common denomination is called "substance." The "substance" figure indicates the basic weight in pounds of 1,000 sheets (Government) or 500 sheets (commercial) in a specific sheet size.

In the Federal Government "substance 32" for a sulphite paper means that 1,000 sheets in the basic size of 17 by 22 inches weighs 32 pounds; 1,000 sheets of the same size of "substance 40" would weigh 40 pounds. The "substance" figures used commercially are 16 and 20 pounds respectively, since they are based on a ream of 500 sheets of paper.

The larger Federal agencies have field offices which procure paper using commercial sub-

stance figures. Accordingly, this must be taken into account when such agencies are issuing design standards and specifications.

Bond, manifold, and ledger papers are figures on a basic weight of 1,000 sheets 17 by 22 inches. Index paper is figured on a basic weight of 1,000 sheets 25½ by 30½ inches. The basic weight of the different kinds of paper is found in the Government Printing Office Catalog and Price List.

The kinds, grades, and substances of paper most commonly used for forms are shown in figure 78.

PAPER SELECTION GUIDE FOR FORMS

Compiled from "Standard Paper Samples and Their Principal Uses for the Government Printing and Binding"

- Acceptable in appearance
- All erase well
- Long-lasting qualities
- Good for pencil, pen, or machine writing
- Suitable for offset or letterpress printing

GENERAL USE FORMS

Kinds of paper	Grades of paper	Substance (Weight)		Opacity (For front and back printing)		
		1000 sheets Gov't	500 sheets Commercial	One side only	Prefer one side	One or two sides
Writing: Close, uniform formation; smooth, flat surface.	Chemical wood	24	12	X		
		32	16		X	
		40	20			X
Bond: Smooth, flat surface. Good folding qualities.	Chemical wood	40	20			X
Bond: Dense, hard formation; smooth surface, great strength, exceptionally good folding and erasing qualities, and resistance to discoloration from age and exposure to light.	25 percent rag (watermark of U.S. seal—one star)	24	12	X		
		32	16		X	
		40	20			X
	50 percent rag (watermark of U.S. seal—two stars)	32	16		X	
	100 percent rag (watermark of U.S. seal—four stars)	32	16		X	
Manifold: Lightweight; slight bulk; smooth surface.	Chemical wood	18	9	X		
	25 percent rag	18	9	X		

Figure 78

PAPER SELECTION GUIDE FOR FORMS—Continued

Compiled from "Standard Paper Samples and Their Principal Uses for the Government Printing and Binding"

- ● Acceptable in appearance
- ● All erase well
- ● Long-lasting qualities
- ● Good for pencil, pen, or machine writing
- ● Suitable for offset or letterpress printing

	Kinds of paper	Grades of paper	Substance (Weight)		Opacity (For front and back printing)		
			1000 sheets Gov't	500 sheets Commercial	One side only	Prefer one side	One or two sides
GENERAL USE AND BOOKKEEPING FORMS	Ledger: Semistiffness, strength, flexibility, durability; smooth surface. Good folding qualities.	Chemical wood	48	24			X
			64	32			X
			88	44			X
		25 percent rag (watermark of U.S. seal—one star)	48	24			X
			64	32			X
			88	44			X
		100 percent rag (watermark of U.S. seal—four stars)	48	24			X
			64	32			X
			88	44			X
CARD FORMS	Index: Semistiffness, strength, flexibility, durability, smooth surface. Good folding qualities.	Chemical wood	220	110			X
			280	140			X
			340	170			X
		25 percent rag	220	110			X
		100 percent rag	250	125			X

Figure 78

Legible Carbon Copies

To obtain legible copies in the greatest possible number from carbon paper, certain principles must be followed. For bond, writing, and manifold papers, if sheets in the set are to be of different substance weights the heaviest weights may be used only as the first or the last sheet, or both. There are also definite limits to the total substance weight that may be used to the set.

Multiple Forms To Be Filled in by Typewriter. A set of forms may be made up of original, with a substance of 32, and five duplicates, each with a substance of 18, for a total substance of 122 pounds. The same type set, however, may consist of original, substance 32, four duplicates, each with a substance 18 (total substance weight, 104 pounds), with the last duplicate substance 32, giving a total weight of 136 pounds for the set.

The total weight of all sheets in the set (not including carbons) must not exceed 122 pounds, unless the excess weight falls in the last sheet, in which case the weight of all sheets preceding the last must not exceed 104 pounds. Any combination of weights desired may be used, so long as allowable limits are not exceeded and the heaviest sheets are placed at the beginning and/or end of the sets.

Multiple Forms To Be Filled in by Pencil. The same principles for forms filled in by typewriter must be followed. The total substance weight of the set, however, is limited to 104 pounds, except in sets in which the weight of all sheets preceding the last does not exceed 72 pounds. For example, a top-limit set might be made up of original, substance 32, and four duplicates, substance 18 (total, 104 pounds). A top-limit set could also consist of original and three duplicates, all substance 18 (total weight, 72 pounds), with a final sheet of substance 40 (total, 112 pounds). Best (pencil) results can be obtained by placing a hard, stiff paper board back of the set before filling in.

Grain of Paper

The direction of the grain of the paper on which a form is printed may be an important factor, since there is greater strength in this direction than in the other. This is true, particularly of heavy paper such as index or ledger. Paper bends, folds, or stands upright more easily with the grain than against it. Some practical applications of grain direction for forms printed on index or ledger paper follow:

- Forms to be filled in by typewriter or other business machines should have the grain in the paper running parallel to the platen of the machine so that the form will wrap around the platen more easily.
- Forms to be filed vertically in a box, drawer, tray, and so forth, should have the grain running vertically to lend added stiffness so that the forms will stand up in the file without additional support.
- Ledger sheets to be filed in binders should have the grain running parallel to the binding edge to provide flexibility when the pages are turned.

The direction of the grain seldom needs to be considered when lightweight paper such as chemical wood writing, bond, or manifold is used—only when definite functional factors are involved.

Colored Paper

When colored papers are used, each color should have a meaning. Color may help in quickly identifying copies of a form for routing or filing, and may be used as an "attention getter." For example, the color may draw the attention of the user of a form to the copy on which he should take action.

On the other hand, use of colored paper should be carefully examined, since it is more expensive than plain white. Also, in reordering a form, it may be hard to match the colors previously used. Finally, readability may be a governing factor, since printing on colored paper may be less easily read than on white paper.

Scientific studies of colors in printing show that black on white gives the greatest contrast. It follows that, if colors are to be used, light colors such as buff and green are the best in keeping eye fatigue to a minimum and providing the best possible contrast. Pink and salmon tend to tire the eyes if much reading is involved.

INK

Colored ink should be considered if it serves as a visual aid to filling in and reading a large volume of forms. An example of effective use of colored ink is on the Standard 500 series, Hospital Clinical Record Forms, which are printed in sepia (brown) ink. When filled in, the data stand out while the printed captions recede into the background.

A selection of colored ink should be made from the Government Printing Office Standard Ink Sample Book and identified accordingly, as "Yellow—GP 32–Y."

Printing in two colors of ink should be avoided except under extreme conditions and it should be amply justified. The Government Printing

and Binding Regulations, published by the Joint Committee on Printing, Congress of the United States, restrict two-color printing:

"The committee is of the opinion that, in general, printing in two or more colors is a waste of Government funds, and consequently, prohibits the same except for classes of work wherein additional colors provide a functional value to the program.

No such printing which involves an additional expenditure of more than $500, whether printed at the Government Printing Office, in an authorized printing plant of a department or agency, procured out of contract field printing allocations, or on waiver by the Public Printer, shall be done without prior approval of the Joint Committee on Printing."

When forms are printed in more than one color, more production time is required because an extra press run may be needed for each separate color. This lengthens delivery time and increases printing costs. Specialty forms such as continuous and unit sets are an exception.

Two-Sided Printing

Printing a form on both sides of a sheet of paper frequently offers certain advantages. For instance, a nonstandard size form may be reduced to standard size, or additional sheets of a form may be eliminated by two-sided printing.

When a form is to be printed on both sides, the printer needs to know how the reverse is to be printed in relation to the front. This depends on the use of the form and the method of filing or binding. The usual methods are illustrated in figure 79.

- *Head to head.* The top of the form is in the same position front and back
- *Head to foot.* The top of the form on one side corresponds to the bottom of the form on the other side
- *Head to side.* The front and back of the form are printed at right angles to each other—if the front is printed on the 8-inch dimension, the back will be printed across the 10½-inch dimension, and vice versa.

Light weight or translucent paper is not used when printing a form on both sides because the printing and writing shows through the paper. This reduces the legibility of the form. Since heavier, opaque paper is used, the number of copies of the form that can be obtained at one writing is limited. If two or more typings are needed to get the number of copies required, it may be more economical to print a form on two sheets of lighter weight paper rather than on both sides of a heavier sheet.

MARGINS

To place the form correctly on the paper, the printer must be given the correct margin specifications. It is standard practice to specify the top and left margins only. Margins for both sides of a form printed front and back are specified. For example, a form filed in a binder is printed head to head. The binding margin is on the left of the front and on the right of the back.

REGISTERING

If two or more copies of a form are to be filled in simultaneously, all copies whether in single sheets, sets, or pads must register. The fill-in data written on the original will then fall in exactly the same position on the carbon copies. Likewise, two different forms to be filled in at the same time must register. If one form is to register with another and one of these forms has already been printed, a sample of the printed form should be marked "For register purposes only" and furnished the printer.

CROP MARKS

Crop marks are placed in each corner of the form layout to indicate the trimmed size as shown in the progression of a form, figure 10. These marks are reproduced when the form is printed; they guide the printer in trimming the form, maintaining correct margins, and register from one copy to another.

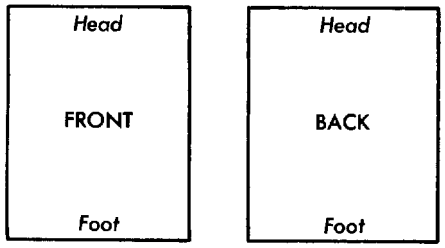
NUMBERING

Forms should be preprinted with serial numbers only when a high degree of control should be maintained on the form itself (bonds, money orders, and so forth), or on items to which the

TWO-SIDED PRINTING

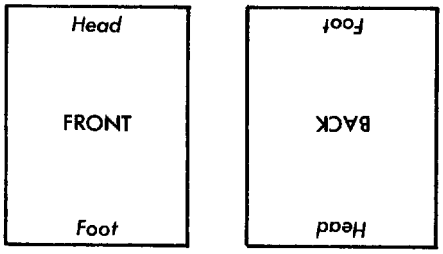
HEAD TO HEAD

- Head (top) of front to head (top) of back



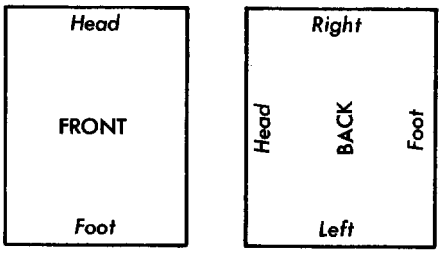
HEAD TO FOOT

- Head (top) of front to foot (bottom) of back

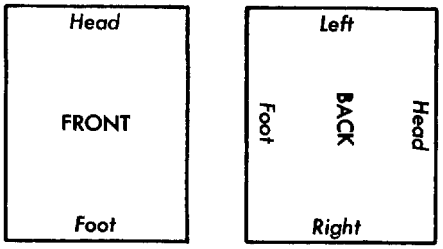


HEAD TO SIDE

- Head (top) of front to right of back



- Head (top) of front to left of back



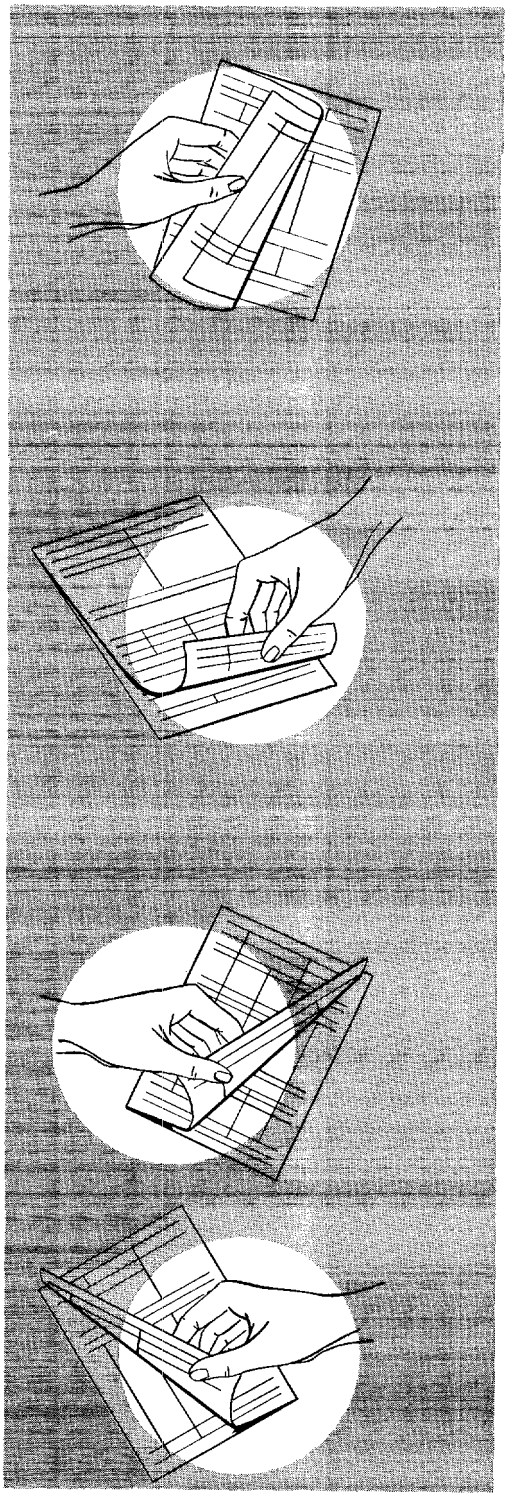


Figure 79

form pertains (medicine, industrial diamonds, electronic machine spare parts, and so forth).

Numbering machines vary in the digit capacity and in the size of the digits. Sufficient space should be allowed on a form to accommodate the size of the numbering machine head, not just the number itself which takes less space. Hence, the analyst must know in advance the type of equipment to be used in order to provide enough space for a serial number. The space for the number is plotted first and the remainder of the form designed around it.

If a form is made up in a multiple-part set, each part of the set has the same number. Therefore, printing specifications should include information on how the forms are to be numbered: singly, in duplicate, in triplicate, and so forth. If possible, the printer should be allowed to furnish a list of "skipped" numbers of any forms spoiled in production. This eliminates the special operation necessary to replace such forms.

PERFORATING

A perforation is a series of slots (lines) or pin holes pierced in paper to weaken it for easy separation. For example, when a form is folded for the purpose of making a duplicate copy, a perforation for separating the two parts is placed across the fold. Printing specifications should include the number of perforations, their direction and location.

Press Perforation (Slot)

The press (slot) perforation is the one most commonly used and is most economical. It is used in almost all cases to perforate forms for tearing on the fold. An easy, medium, or hard tear perforation may be obtained. It is made by a rule with sharp, serrated edges which stands higher than the type on the printing press. This rule acts as a knife which cuts a line of short slots in the paper as the form is printed. The printing ink can be seen in the perforation, but this is ordinarily not objectionable. Figure 80 sketches slotting.

A minimum space of ¼-inch should be allowed on either side from the perforation to the printed matter. The perforation can be done horizontally, vertically, or both.

A slot perforation also can be made without an ink impression by the use of a rotary wheel attached to the press. However, it perforates in one direction only, across the form.

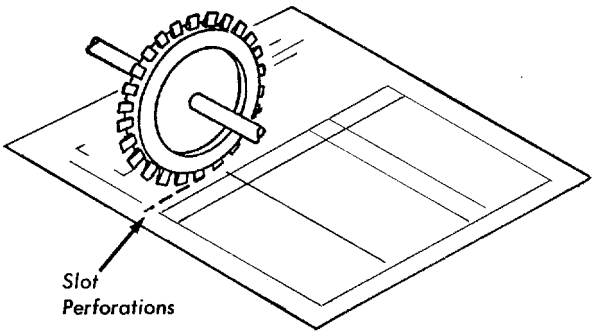


Figure 80

Machine (Pinhole)

The machine (pinhole) perforation is clear, more positive, and costlier than the press perforation. A separate machine operation is necessary after the form has been printed. Pinhole perforations consist of a series of round holes, closely spaced, with a minute circle of paper actually punched out of the center of each hole, shown in figure 81.

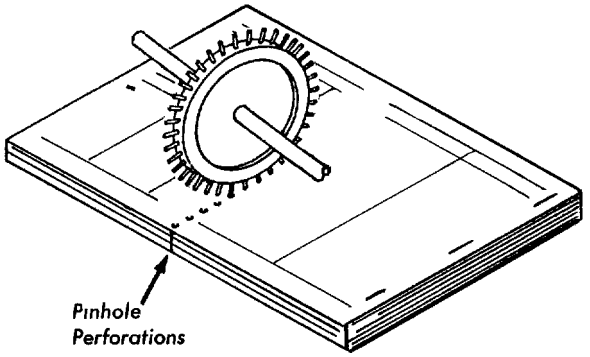


Figure 81

SCORING

To "score" means the creasing of paper to permit folding without breaking the fibers of the paper. It becomes necessary when thick paper or cards are to be folded, such as double

postcards, or when folding is against the grain of the paper. Printing specifications should include the number of scores, their direction and location.

Forms may be scored at the time of printing by using scoring rules locked in with the type. This leaves an inked scoring impression which is usually not objectionable. Sometimes scoring rules are run on the press by themselves without any type or printing operation, which means an additional press operation and increased cost.

FOLDING

Folding reduces the size and facilitates mailing, filing, storage, and distribution. When possible, forms should be folded as part of the printing job. Care should be taken to insure that the form size, before folding, can be cut from a standard size sheet of paper. The number, direction, and location of the folds are specified for the printer.

The different ways to fold a form are: top and bottom fold, side fold, wrap-around fold, and accordion fold. These folds are shown in figure 82. Uneven folds for binding are described in figures 34 and 35.

PUNCHING

Forms should be punched in the process of manufacture when they are to be:

- Filed in binders
- Placed in files and fastened to file folders

Fastening of papers to folders should be done only when it presents advantages which offset the additional cost and time required. It is justified when:

- Papers need to be divided within a folder into permanent and temporary categories.
- Papers need to be divided within a folder so as to provide immediate reference to a particular type of document, for example, regulatory files containing notices of hearing, agreements, suspensions, amending orders, termination orders, and so forth.
- Using offices call for and use all or much of the contents of folders, rather than individual papers from them.
- Papers are highly valuable or virtually irreplaceable and must be given every protection from the risk of damage or soiling resulting from handling.

Punched holes are referred to as "closed" or "open." The round, closed holes are used in ring binders or with prong folders. Slotted, or open holes, sometimes called "keyholes," have an opening cut from the hole to the edge of the paper. They are used for forms filed in post binders where the slotted opening permits inserting the forms without opening the posts.

Specifications for the printer should include instructions on the number, diameter, and kind of holes; and the exact location shown by measurement from the center of one hole to the center of the next, and from the center of each hole to the edge of the paper. These items are important, since they are related to the filing or binding method.

Closed Holes

"Closed" holes range in diameter from $\frac{5}{32}$ inch to $\frac{1}{2}$ inch. The $\frac{1}{4}$-inch round hole is the one most commonly used. Figure 83 shows the location of standard two- and three-hole punches, and the specifications for the $\frac{1}{4}$-inch punched hole.

Open Holes

The size of open or slotted holes depends upon the size of the binder post, but it should be big enough to permit free movement of the pages. The diameter of the hole is $\frac{1}{32}$ inch larger than the post, as illustrated in figure 84.

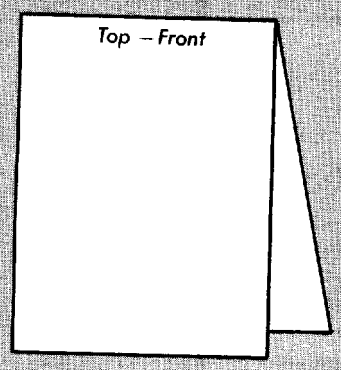
ROUND CORNERS

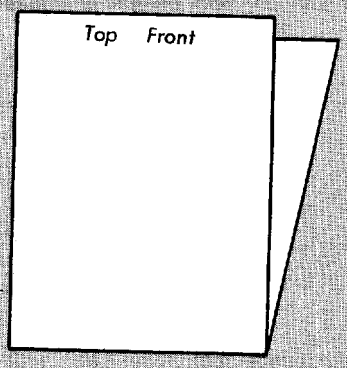
Round corners are desirable on those forms, as visible file cards, where constant handling causes the square corners to become frayed. All four corners are rounded on some forms; only the two corners most exposed to wear are rounded on others.

Rounding corners is a separate bindery operation, consequently an additional cost item.

WAYS TO FOLD A FORM

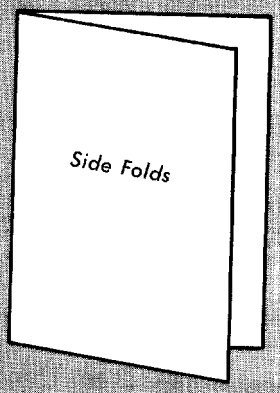
TOP AND BOTTOM



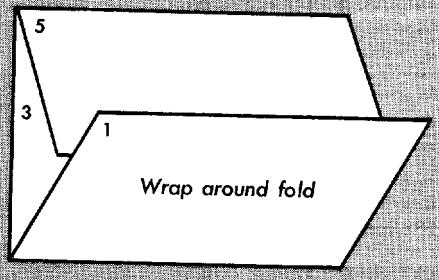


- Facilitates typing
- Generally printed head to foot
- May be folded allowing for binding
- May be used for duplicate forms by identical printing on pages one and three. Perforation on fold for separation

OTHER FOLDS



- Not recommended for typing since it is bulky
- Hard to insert carbons
- Used for handwritten forms, when only an original is needed
- Printed head to head



- Used for six page forms
- Facilitates typing
- Printed head to foot

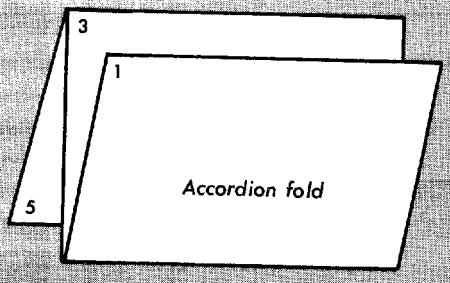


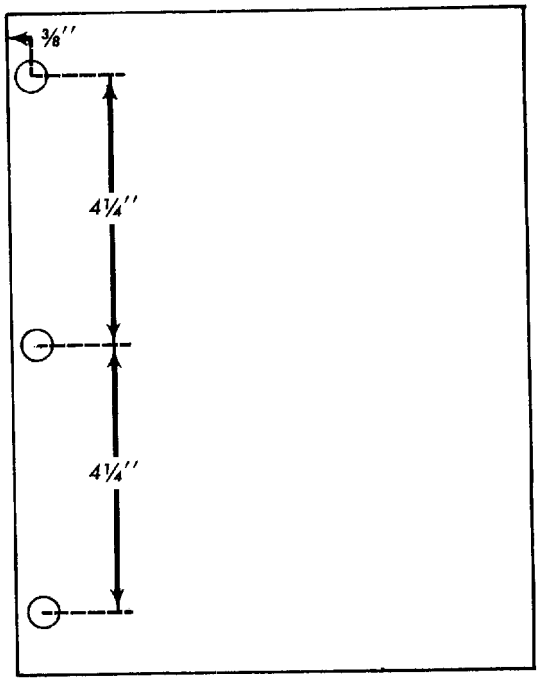
Figure 82

PLACEMENT OF HOLES FOR PUNCHING

THREE RING BINDER

SPECIFICATION

Number of holes	3
Diameter	1/4"
Kind	Round
Position	10 1/2" way
Inches center to center	4 1/4"
Inches from center of hole to edge of sheet.	3/8"



TWO HOLE PRONG FASTENERS

SPECIFICATION

Number of holes	2
Diameter	1/4"
Kind	Round
Position (depending on filing method).	Top or bottom
Inches center to center	2 3/4"
Inches from center of hole to edge of sheet.	3/8"

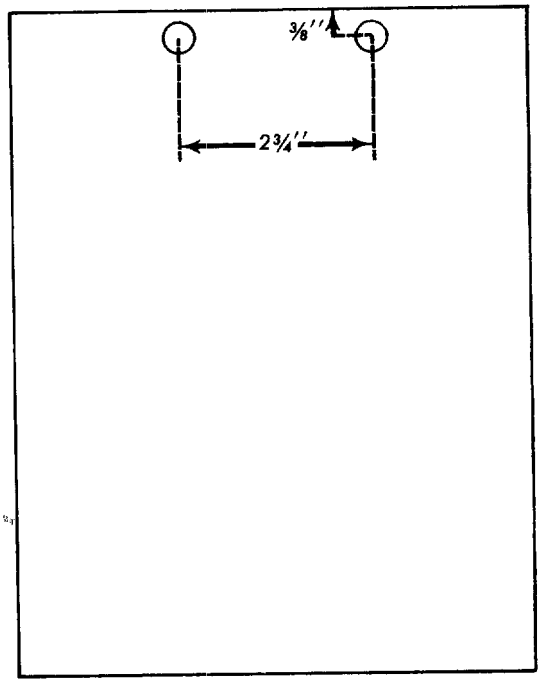


Figure 83

When rounding is needed, the printing specifications should show the radius of the circle on which the rounding is based, and the number and location of the corners affected, as shown in figure 85.

SLOT SIZE	POST SIZE
 7/32"	3/16" or 6/32"
 11/32"	5/16" or 10/32"
 13/32"	3/8" or 12/32"

Figure 84

COLLATING

Assembling sets of forms is the process of "collating." Besides variations in the grade, weight, and color of paper in sets of forms, they may differ in other respects such as punching and perforating. When preparing specifications, show the sequence of each page of a set so that the assembly will result in finished sets in the proper order.

Although collating is an extra bindery operation involving added expense, it is usually justified. A bindery is equipped with time-saving devices for assembling, which can save clerical time spent in manual collating and can reduce errors in final assembly. Collating into sets and padding also may result in savings in the procurement, storage, and distribution activities. The forms are then requisitioned and furnished in units rather than as individual forms.

PADDING

Making up forms into pads involves gumming one edge and fastening to a chipboard backing. Most forms are padded at the top to minimize the effort required to remove copies.

Pads with 100 sheets per pad are the most economical to manufacture. To illustrate, pads with 50 sheets to a pad require twice as many chipboard backings, twice as many pads to cut apart, and count.

In some instances it may be desirable to include carbon paper in the back of the pad. This is particularly desirable when such forms are to be used in the field, or other places where carbon paper is not readily available.

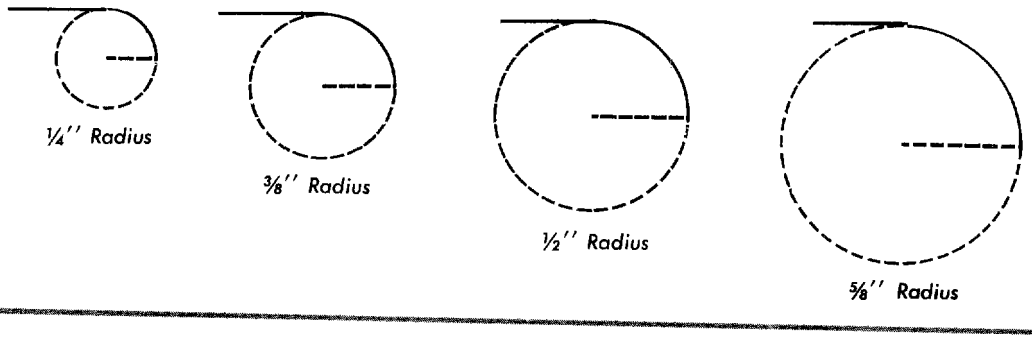


Figure 85

VI. FORMS SPECIFICATIONS AND PROCUREMENT

SPECIFICATIONS

Forms specifications tell the agency's publications or printing procurement office what is wanted and guide the printer in producing the form. They:

- Make misunderstandings less frequent and thereby eliminate the costly waste which results when forms are printed or constructed incorrectly.
- Speed production, and therefore reduce cost, by supplying all concerned with clear, specific instructions, thus reducing the delay due to questioning telephone calls and correspondence.
- Maintain uniformity in the forms received on each re-order.

The persons in an agency's printing procurement office are usually the first to suffer from poorly written specifications. This is because publications or procurement personnel tell the printer what is wanted and subsequently must answer his questions. The better the specifications from the forms analyst—the fewer questions the publications or procurement staff will have to answer.

To insure that printing requirements and delivery schedules can be met, any unusual, special, or doubtful situations should be discussed by the forms analyst with the publications or printing procurement office while the form and related procedures are being analyzed. Certainly, such discussions should take place before the final design and writing of specifications.

To develop printing specifications some agencies use a work sheet. Figure 86 is a sample. It contains the items of specifications for general use forms and shows the way each item is written. Since all items on the work sheet would never apply to a single form or to a set of forms, those items not applicable may either be crossed out or left blank. Item 16 provides for a "dummy" mock up to be submitted where this would be helpful. Figure 87 shows how a dummy graphically informs the printer the way to manufacture a form.

The work sheet is *not* a substitute for the regular printing requisition. It is intended to serve as a check list to insure that all possible features have been included which will contribute to the form's utility, and as a guide in writing specifications correctly.

PROCUREMENT

When the form layout, printing specifications, and distribution requirements have been completed, the form is ready for composition and printing. Most agencies have a "Requisition for Printing Services" which covers not only the printing of forms, but also the reproduction of publications, drafting work, photographic reproduction, and distribution. It is usually filled in at a level authorized to obligate agency printing funds. Figure 88 is a sample of such a form.

With a few exceptions, processing instructions are necessary to place a new or revised form into use. If the form is not distributed simultaneously with these instructions, it should be in stock for requisitioning by the time the instructions reach the users of the form.

It is important that the requisition include the date that delivery is desired. Such terms as "Immediately," "At once," "As soon as possible," and "Urgent" are not as meaningful as a given delivery date.

Proofs

Before sending a form for printing, it pays to take the time to give the forms a *final* review. This can save a good deal of money. The story of Mr. Blandings and his dream house has a counterpart with forms—it is painfully expensive to change one's mind once work has started.

PRINTING SPECIFICATIONS WORK SHEET

Cross out items in left column which do not apply.

1. FORM/PUBL. NO. & TITLE	FORM/PUBLICATION NO.	TITLE			
2. SIZE	SPECIFY WIDTH FIRST				
3. PAPER AND INK	KIND	GRADE	SUBSTANCE	COLOR	COLOR OF INK *(If other than black)*
4. GRAIN	DIRECTION ☐ PARALLEL TO TOP OF FORM ☐ PARALLEL TO LEFT OF FORM				
5. PRINT	☐ ONE SIDE ☐ TWO SIDES	IF TWO SIDES, PRINT ☐ HEAD TO HEAD ☐ HEAD TO FOOT ☐ HEAD OF FRONT TO LEFT OF BACK ☐ HEAD OF FRONT TO RIGHT OF BACK			
6. MARGINS	FRONT TOP LEFT	BACK TOP LEFT			
7. REGISTER	☐ ALL SHEETS ☐ IN SETS ☐ IN PADS ☐ WITH FORM NO.				
8. NUMBER	SINGLY, IN DUPLICATE, ETC.	STARTING NO.	ENDING NO.	SKIPS ☐ NOT ACCEPTABLE ☐ ACCEPTABLE IF LISTED	
9. PERFORATE	NO. OF PERFORATIONS	DIRECTION ☐ HORIZONTAL ☐ VERTICAL	LOCATION INCHES FROM TOP	INCHES FROM LEFT	
10. SCORE	NO. OF SCORES	DIRECTION ☐ HORIZONTAL ☐ VERTICAL	LOCATION INCHES FROM TOP	INCHES FROM LEFT	
11. FOLD	NO. OF FOLDS	DIRECTION ☐ HORIZONTAL ☐ VERTICAL	LOCATION INCHES FROM TOP	INCHES FROM LEFT	
	AFTER FOLDING THE FOLLOWING SHOULD BE ON THE OUTSIDE				
12. PUNCH	NO. HOLES / DIAMETER	KIND	LOCATION *(Top, left, etc.)*	INCHES CENTER TO CENTER	INCHES: CENTER OF HOLE TO EDGE OF SHEET
13. ROUND CORNER	RADIUS	NO. CORNERS	LOCATION ☐ TOP RIGHT ☐ TOP LEFT ☐ BOTTOM RIGHT ☐ BOTTOM LEFT		
14. COLLATE	NO. SHEETS TO SET	☐ IN ORDER SHOWN UNDER "PAPER" ☐ OTHER *(Specify)*			
15. PAD	NO. SHEETS TO PAD	NO. SETS TO PAD	LOCATION OF PADDING ☐ TOP ☐ BOTTOM ☐ LEFT ☐ RIGHT	REINFORCE WITH ☐ CHIPBOARD BACK	
16. DUMMY ATTACHED	☐ FOLD	☐ PUNCH	☐ OTHER *(Specify)*		
17. WRAP	NO. SHEETS PER PACKAGE	NO. SETS PER PACKAGE	NO. PADS PER PACKAGE	NO. CARDS PER PACKAGE	☐ BEST METHOD
18. LABEL	☐ LABEL EACH PACKAGE ON ONE END SHOWING FORM NO., TITLE, QUANTITY IN PACKAGE, AND SERIAL NOS., IF ANY.				
19. SPECIAL	(Information not specifically provided for on worksheet, such as make and model of machine on which form is written.)				
20. PREPARED BY & DATE	NAME	DATE			

Figure 86

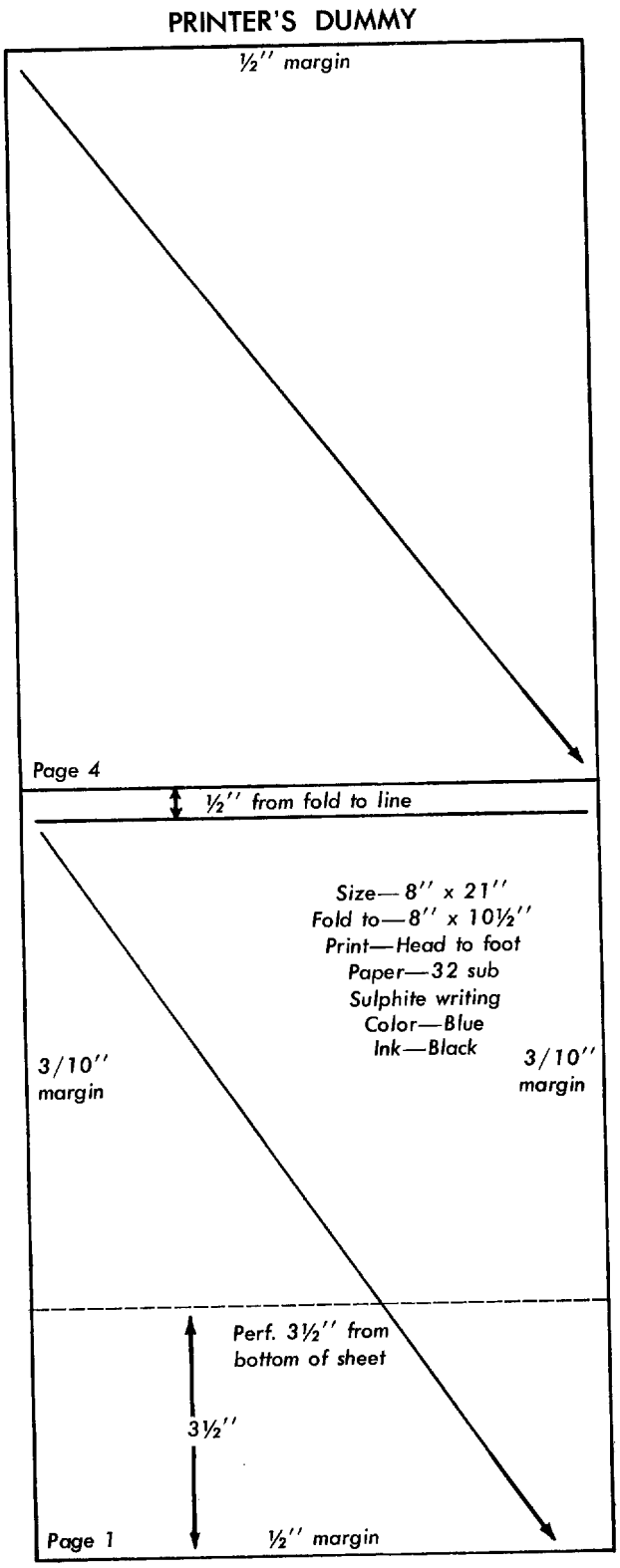


Figure 87

Three of the most wasteful things in this area are:

- Calling for extra proofs or revised proofs. Extra proofs cost money.
- Failing to mark all corrections plainly. If the printer doesn't understand what is wanted, errors will result.
- Asking for a reprint when minor errors occur in the finished job.

ALTERATIONS IN PROOFS

For one fiscal year, $713,128.00 was spent by the Government Printing Office in making authors' alterations. This figure was for setting of the type only and represented 12 percent of the total cost of typesetting.

Letterpress

Corrections on a printer's proof are made in the margins opposite the indicated errors on the "R" set. It is designated "R" set by the Government Printing Office since it is the one RETURNED to that Office. The "R" set has been reviewed by the proofreaders of that Office and contains any questions on items which they believe need clarification.

Do not attempt to make corrections by eradicating the print and writing between the lines. To simplify the task of correcting proofs, a list of proofreaders' marks are shown in figure 89.

Offset

The final copy which is to be photographed in the making of the printing plates is the "proof." If corrections are made on this copy, it may be spoiled and considerable time and effort wasted. To avoid this, use a transparent sheet on top of the final copy on which corrections are made.

Return of Proofs

The prompt return of proofs to the printer helps everyone. Generally any delay in the return of proofs causes the printer to have to reschedule the production and delivery of the job or else reschedule other jobs. This causes the inevitable phone calling, explaining, and other time-consuming chores.

GENERAL SERVICES ADMINISTRATION

REQUISITION FOR PRINTING SERVICES

This form to be used for Printing, Duplicating, Drafting, Photographic Reproduction, Mailing, and Distribution Services. Submit an original and three copies.

1. REQUISITION NO. | SHOP JOB NO.
2. DATE PREPARED | CHARGES
3. DATE WORK REQUIRED | RERUN NO.
DO NOT USE THIS SPACE

4. OFFICE OR SERVICE | DIVISION | BRANCH OR SECTION

5. FOR INFORMATION CALL (*Name*) | LOCATION (*Building and room*) | TELEPHONE CODE | EXTENSION

6. TYPE OF PRINTING SERVICE

- ☐ PRINTING (LETTERPRESS, ETC.)
- ☐ OFFSET
- ☐ STENCIL, ☐ DITTO } ☐ RETURN ☐ DESTROY
- WORK WILL BE REPRINTED ☐ YES ☐ NO
- ☐ PREPARE: ☐ MIMEO STENCILS, ☐ DITTO MASTERS, ☐ PLATES FOR OFFSET, ☐ COPY FOR PHOTOGRAPHIC OFFSET
- ☐ OZALID
- ☐ PHOTOSTATS ——— POSITIVES ——— NEGATIVES
- ☐ ADDRESSING
- ☐ MAILING
- ☐ DISTRIBUTION
- ☐ DRAFTING OR ART WORK
- ☐ OTHER _____

Mimeo stencils and original copy will be returned with completed work.

7. APPROPRIATION AND ALLOTMENT CHARGEABLE

8. FORM NUMBER AND TITLE OR DESCRIPTION OF MATERIAL TO BE PRINTED

9. SPECIAL INSTRUCTIONS OR REMARKS (*Make complete as possible*)

10. SPECIFICATIONS

QUANTITY REQUIRED | MONTHLY CONSUMPTION

NUMBER OF PAGES OF COPY SUBMITTED | PAPER (WEIGHT AND COLOR)

COMPLETED SIZE

- ☐ 3" X 5"
- ☐ 5" X 8"
- ☐ 8" X 10½"
- ☐ 10½" X 16"
- ☐ 17" X 22"
- ☐ _____

PRINT: ☐ ONE SIDE ONLY

- ☐ HEAD TO HEAD
- ☐ HEAD TO FOOT
- ☐ HEAD TO LEFT
- ☐ HEAD TO RIGHT

SPECIAL MARGINS | FOLD TO " X "

- ☐ ASSEMBLE AS PAGED
- ☐ STAPLED — ☐ ON TOP ☐ LEFT SIDE
- NUMBER OF STAPLES ☐ ONE ☐ TWO ☐ THREE
- ☐ PADDED—SHEETS PER PAD

PUNCHING

- ☐ TOP
- ☐ BOTTOM
- ☐ RIGHT SIDE
- ☐ LEFT SIDE

NUMBER OF HOLES | DIAMETER

POSITION OF HOLES " CENTER TO CENTER

11. DELIVERY

NUMBER OF COPIES	NAME OF PERSON TO WHOM WORK IS TO BE DELIVERED	BUILDING	ROOM NO.

12. REQUISITIONED BY (*Signature and date*)

13. APPROVING OFFICER (*Signature and date*)

14 OTHER APPROVAL, AS REQUIRED (*Signature and date*)

Fill out other side for mailing and distribution services

GSA FORM 50
AUGUST 1956

Figure 88

Approved For Release 2001/07/17 : CIA-RDP74-00005R000100020029-1

PROOFREADER'S MARKS

	WHAT IS TO BE DONE	MARGINAL NOTATION *Showing WHAT is to be done*	NOTATION IN TEXT *Showing WHERE it is to be done*	ILLUSTRATION
PUNCTUATION	Insert period	⊙	^ or /	press^ The learned correct
	Insert comma	^,	^ or /	However/the necessity of a
	Insert apostrophe	^'	^ or /	purely printers errors, and
	Insert colon	^:	^ or /	of the following^ pencils,
	Insert semi-colon	;/	^ or /	other days/ there is no rea
	Insert quotation marks	"^ or ^"	^ or /	"^ ^" The word^ not^ was omitted by
	Insert hyphen	=/	^ or /	open to non^members only.
	Insert question mark	?/	^ or /	how will they know/ That is
	Insert exclamation point	!/	^ or /	a terrific climax/ Naturally
	Insert parentheses	()	^ or /	on Page 37^ which see^ Here
	Insert brackets	[]	^ or /	[] "These^ the free-silver Demo
	Insert en dash	/en/	^ or /	/en/ were employed^ men who first
	Insert em dash	/—/	^ or /	/—/ opinion^ their experience will
SPACING	Push down this space	⊥	/	⊥ upon/the best arrangement
	Space evenly	✓✓✓	^	✓✓✓ I have^ talked^ with^ many a
	Insert space	#	^	# and almost^immediately associ
	Less space	⌣	⌣	⌣ one unconsciously⌣ calls up
	Close up entirely	⁀	⁀	⁀ may be neces⁀sary but, the
	Insert em quad space (*Indent one em*)	□	^	□ under construction^ Twenty
	Take out character and close up	⁀g	I	⁀g they w⁀ere rather what we
	Take out lead	g ld	—	g ld with considerable regularity were previously used on the
	Insert lead between lines	ld>	>	ld> naturally could not be resp state or province as the

Figure 89

PROOFREADER'S MARKS (Continued)

	WHAT IS TO BE DONE	MARGINAL NOTATION *Showing WHAT is to be done*	NOTATION IN TEXT *Showing WHERE it is to be done*	ILLUSTRATION
POSITION CHANGE	Move to left	[	○	[Life Underwriting
	Move to right	]	○	] Life Underwriting
	Lower	⌴	none	⌴ Supply Department
	Raise	⌐	none	⌐ Supply Department
	Paragraph	¶	^	¶ and of everything. ^It was
	No paragraph	no¶	none	cannot be transferred. no¶ A new call must be made
	Transpose letters or words	tr	⌐⌴	tr When branch operator answer
TYPE	Change defective letter	×	○	× most of them have been prac
	Change to proper style of type (*wrong font*)	wf	○	wf or could just use the exerc
	Set in capitals	caps	≡	caps the major provisions of the
	Set in small capitals	s.c.	=	s.c. the MAJOR provisions of the
	Set in lower case	l.c.	/	l.c. the Lower half of the region
	Set in Roman	Rom.	○	Rom. the lower half of the region
	Set in Italic	ital	—	ital the lower half of the region
	Set in bold face	bf	~	bf the lower half of the region
	Set in bold face Italic	bf ital	~	bf ital the lower half of the region
	Use ligature (fi, fl, ff, ffl)	fi	⌒	fi tiring to the fingers. Natu
	Letter upside down; reverse	ꟻ	○	ꟻ Any operator will have prio
DELETION	Take out; delete	ꝺ	○	ꝺ emphasized this this point
	Take out character and close up	ꝺ	⌒	ꝺ emphasized this point in a
REINSTATEMENT	Retain crossed-out word or letter; let it stand	stet	—	stet that a ~~complete~~ survey can
	Retain only crossed-out words under which dots appear	stet	.....	stet ~~when and cost~~ removed from

Figure 89—Continued

CHECKLIST

The questions are so worded that X-marks in the "No" column indicate the need for corrective action. All of the items below, however, will never apply to a single form.

	Yes	*No*
1. Do type faces insure good readability and appearance?	☐	☐
2. Do rule weights and dingbats guide the eye, give emphasis, or attract attention to the neighboring parts of a form?	☐	☐
3. Is the title placed where it can readily be seen but will not interfere with the filing and other data?	☐	☐
4. Is the agency name included on a form used by the public?	☐	☐
5. Is the form identified by a form number with edition date, and can it be easily seen?	☐	☐
6. Are pages of a multiple-page form numbered?	☐	☐
7. Is the Bureau of the Budget control symbol placed in the proper position on a public-use form?	☐	☐
8. Is the Comptroller General legend included on accounting forms subject to his approval?	☐	☐
9. Are brief instructions for preparation of the forms placed at the top where they are readily seen or close to the section to which they apply?	☐	☐
10. Are lengthy instructions printed in two columns?	☐	☐
11. If lengthy instructions appear on the reverse of a form, on a separate sheet, or in a booklet, is reference made to them in the brief, general instructions?	☐	☐
12. Are items grouped according to workflow or by the types of material on a source document?	☐	☐
13. Are items on the form arranged in sequence with those on other forms from which data will be taken or to which data will be transcribed?	☐	☐
14. Is the form a standard size?	☐	☐
15. Are gripper margins allowed on the form?	☐	☐
16. Does the horizontal and vertical spacing conform to the writing method—typewritten, handwritten, or both?	☐	☐
17. Is the form designed so that it will not be necessary for the typist to space through captions or roll the typewriter platen up to see the caption and roll it back to make the entry?	☐	☐
18. Does the typing start from a common left position?	☐	☐
19. Are vertical rules alined to reduce tabular stops to a minimum?	☐	☐
20. Have the various columnar arrangements been considered for using space advantageously and for reading and writing ease?	☐	☐
21. Are boxes, stub heads, column heads, sections, and parts of the form identified by letters and figures?	☐	☐
22. Are entry spaces which are not to be used blocked out or instructions supplied?	☐	☐
23. Have the different ways of placing X-boxes been considered to insure the best arrangement?	☐	☐
24. Has sufficient space been allowed for certifications, signatures, titles, or dates?	☐	☐
25. Are "To" and "From" boxes used to make the form self-routing?	☐	☐
26. Are copies in a set of forms identified to make them self-routing?	☐	☐
27. Has a form to be mailed been designed to fit into a window envelope?	☐	☐

	Yes	*No*
28. Has a form requiring a reply been designed for return mailing in a window envelope?	☐	☐
29. Does a self-mailer form meet postal regulations, and is the address area in the proper position?	☐	☐
30. Does the form request the respondent to give a change in address to keep the mailing list up to date?	☐	☐
31. Have binding margins been allowed on a form which is to be punched for filing in a binder?	☐	☐
32. Is filing information placed on the form so it can be filed and found readily?	☐	☐
33. Is a visible file card form designed so that the filing data show in the visible area for current use, and in a vertical file for storage at a later date?	☐	☐
34. Has consideration been given to folding a large form to standard size to fit into standard equipment, binders, or folders?	☐	☐
35. Is the form layout "marked up" for the compositor with the desired type faces and rule weights?	☐	☐
36. Are the lines of type in text marked for proper leading?	☐	☐
37. Are one-way screened-rules substituted for pen ruling?	☐	☐
38. Have the correct weight, grade, and color of paper been chosen to perform the particular job efficiently?	☐	☐
39. Is there sufficient contrast between the paper and ink to insure good readability?	☐	☐
40. Has two-color printing been avoided?	☐	☐
41. Have the use of the form and the method of filing or binding been considered in determining whether a two-sided form is to be printed head to head, head to foot, or head to side?	☐	☐
42. If printed on both sides, have margins been properly specified for each side?	☐	☐
43. Have the following features been considered: registering, serial numbering, perforating, scoring, punching, rounding corners, collating, and padding?	☐	☐
44. Have printing specifications been checked against the "Specifications Work Sheet" in this Handbook to insure that all items have been included and are clearly stated?	☐	☐
45. Is the required *delivery* date for the forms understood by all concerned?	☐	☐
46. Have the distribution of the form and the instructions for its use been coordinated?	☐	☐
47. Are proofs corrected properly with proofreaders' marks?	☐	☐

* U.S. GOVERNMENT PRINTING OFFICE : 1960 O—568532

Washington: 1960

Approved For Release 2001/07/17 : CIA-RDP74-00005R000100020029-1